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From Work to Retirement: The Experience of a National Sample of Men

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Abstract

Based upon 1966-1980 data from the National Longitudinal Surveys of the Labor Market Experience of Men, this monograph (1) explores the effect of alternative definitions of retirement on the numbers and characteristics of retirees; (2) examines economic aspects of life after retirement, including the extent and character of post-retirement labor market activity and the level and sources of post-retirement income; and (3) analyzes several social-psychological facets of retirement, including post-retirement leisure activities, the determinants of psychological well-being of retirees, and the impact of retirement on level of life satisfaction. The relation between retirement and life satisfaction is found to vary depending upon the specification of the multivariate model.

Preface

This monograph is based upon the data collected between 1966 and 1980 in the National Longitudinal Surveys of the Labor Market Experience of Older Men. We use the data for an empirical exploration of alternative definitions of retirement (Chapter 1), an analysis of some of the economic aspects of post-retirement experience (Chapter 2), and an examination of several social-psychological facets of retirement, including the effect of retirement on psychological well-being (Chapter 3).

The monograph is in a sense a progress report; data from the 1981 NLS survey that have just become available will permit us to deepen the analysis in a number of respects--particularly by allowing an examination of the influence of retirement on health and a more sophisticated longitudinal analysis of the impact of retirement on psychological well-being.

Without implicating them in whatever shortcomings may remain in the monograph, we wish to acknowledge our debt to colleagues at The Center for Human Resource Research who reacted to an earlier draft, and especially to Gilbert Nestel for his help with Chapter 1, to Joan Crowley for her advice with respect to Chapter 3, and to Kezia Sproat for her editorial suggestions. We are also grateful to Alan Fox of the Social Security Administration for reading and reacting to the portion of Chapter 2 relating to replacement rates. Finally, we express our thanks to Helene Churchill and Mary Jansen for serving as intermediaries between us and the computer, and to Sherry Stoneman for typing the several drafts of the manuscript.

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A Note on the Tables

The tables of this report show the number of sample cases underlying all statistics, but the statistics are invariably based upon weighted data. Because black men are overrepresented relative to white men in the NLS sample in a ratio of between three and four to one, and thus have correspondingly smaller sampling weights, a statistic that is shown for the entire population will generally differ substantially from an average for whites and blacks weighted by the number of sample cases shown for each race.

In tables showing percentage distributions, percentages may not add to 100 because of rounding. Cases of "no data" have been eliminated from totals in computing percentages and means. We do not show the number of cases of "no data" for any variable, but the number can frequently be ascertained by comparing the number of sample cases for the total sample with the sum of the numbers for the several categories of the variable in question. For example, in Table 2.6, comparison of the total n (1591) with the sum of the ns under "reason for retirement" (1589) reveals that there are two sample cases that could not be classified by reason for retirement. By the same operations we discover that there are 393 cases of "no data" on "family income excluding respondent's earnings."

Several tables in the monograph present the results of multiple classification analyses (MCA). MCA is analogous to multiple regression analysis in which all of the independent variables are expressed in categorical form. The constant term in the MCA equation is the mean of the dependent variable, and the coefficient of each explanatory variable represents a deviation from this mean. Thus, the "adjusted" value of the dependent variable for each category of an independent variable represents what the dependent variable would have been had the members of the category been "average" in terms of all the other independent variables included in the analysis.

Most of our MCA tables show only the adjusted values. They also show the F-ratio in parentheses beside the name of each variable. The confidence level of this ratio tests the overall significance of the explanatory variable. The t-statistic tests the significance of a particular code category of the explanatory variable against the grand mean. For example, in Table 2.6 the F-ratio of the impairment index variable tells us that there is a highly significant relationship (.01 level) between this variable and the probability of labor force participation, controlling for all other variables in the analysis. The asterisks beside the adjusted values tell us that the first two are significantly higher than the grand mean participation rate of 16 percent and that the last two are significantly lower.

Executive Summary

Based upon data from the National Longitudinal Surveys (NLS) of the Labor Market Experience of Men for the period 1966-1980, this monograph (1) explores the effect of alternative definitions of retirement on the numbers and characteristics of retirees (Chapter 1); (2) examines economic aspects of life after retirement, including the extent and character of post-retirement labor market activity and the level and sources of post-retirement income (Chapter 2); and (3) analyzes post-retirement leisure activities, the determinants of psychological well-being of retirees, and the impact of retirement on level of life satisfaction (Chapter 3).

Because of its longitudinal design, the NLS data set is invaluable for purposes of exploring these questions. For a nationally representative sample of men age 59 to 73 in 1980 there is periodic information on many dimensions of work activity, income, and attitudes from the time that the vast majority were full-year workers to the time that about three-fifths were retired. Thus, for most of the men who had retired by 1980 the records cover at least several years prior and several years subsequent to retirement.

THE MAJOR VARIABLES

The principal variables that are used in the analysis may be briefly described as follows:

Retirement Status

The NLS data afford the possibility of defining retirement in terms of (1) the respondent's subjective perception of his status, (2) the receipt of Social Security or other pension income, or (3) partial or complete withdrawal from the labor force. In each survey all respondents were asked at what age they expected to stop working at a regular job. One of the precoded responses to this question was "already stopped," and persons who responded in this way have been regarded to be (subjectively) retired. Each survey also obtained information on sources of income, identifying specifically retirement benefits under the Social Security or Railroad Retirement systems, other pension income, and disability payments from the Social Security program or other sources. Individuals who receive any of these kinds of benefits have been classified as retired on the basis of the income criterion. Finally, each survey elicits information on number of weeks of labor force participation in the preceding twelve months and on the number of hours the individual usually worked during weeks of employment. With this information it is possible to classify individuals who retired on the basis of complete or partial labor market withdrawal.

Reason for Retirement

The circumstances under which men retired are determined not on the basis of retrospective questions (which have the disadvantage of being influenced by post hoc rationalization), but by inspection of the entire longitudinal record of each respondent. The basic categories are three: (1) persons who were involuntarily retired under a mandatory retirement plan (mandatory retirement); those whose retirement appears from the total record to have been dictated by poor health (health retirement); and the remainder, i.e., men who appear to have freely chosen retirement (voluntary retirement). The latter group is subdivided into those who retired prior to age 65 (early retirement) and those who retired at that age or later (normal retirement).

Leisure Activities

Information on leisure activities was collected in the 1978 survey, from which it is possible to examine the extent of variation between retired and nonretired men in the number of hours spent during the preceding year on each of six different types of activity: sports or exercise, hobbies, maintenance work around the home, reading, visiting, and unpaid volunteer work. We have constructed two variables for each type of activity: (1) a dichotomous variable indicating whether the respondent engaged in the activity and (2) the total number of hours that he spent on the activity. The latter has also been summed across the six activities to provide an aggregate annual figure.

Health

The respondent's health condition has been measured in each survey by a question that asks whether he has a health condition that limits either the kind or amount of work he can do. In addition, the 1976 survey contained a detailed set of questions designed to ascertain the character and extent of functional limitations ("impairments") the respondent suffered (e.g., walking, lifting, stooping, seeing, etc.).

Life Satisfaction

To measure the degree of satisfaction with their life situations in 1980, respondents were asked whether they were very happy, somewhat happy, somewhat unhappy, or very unhappy with five aspects of life: their housing, the local area in which they resided, their health condition, their standard of living, and their leisure time activities. In addition, they were asked to indicate by means of the same four response categories how they felt "taking things all together." By assigning values from 1 (very unhappy) to 4 (very happy) to the responses to each component and then summing them, these six questions have been combined into a single "satisfaction-with-life" index ranging between 6 and 24. Our interest in the index is twofold: (1) as a means of identifying the factors associated with the psychological well-being of retirees and (2) to permit a comparison of the life satisfaction of retirees and workers, controlling for factors that are likely to be correlated both with satisfaction and retirement status.

PRINCIPAL FINDINGS

The Volume of Retirements, 1966-1978 (Chapter 1, Section II)

(1) The count of the number of "retirees" among men 57 to 71 in 1978 varies substantially, depending on what criterion of retirement one uses and on whether one views retirement as an event (i.e., once retired, always retired) or as a current status, with individuals moving into and out of the category. If one defines as retired a person who at any time during the preceding 12 years met any of our three criteria, the count was about 8.9 million (73.8 percent of all men 57 to 71 in 1978). If, on the other hand, one requires that the individual have met one of the criteria in the year in question (i.e., 1978) the number is 7.5 million (62.6 percent). If all criteria of retirement must be satisfied, the corresponding figures are 6.1 million or 5.4 million, depending upon whether retirement is viewed as an event or a status. Thus, the number of men age 57 to 71 who were retired in 1978 ranges from 5.4 to 8.9 million, depending on one's meaning--a spread of 63 percent on the smaller base.

(2) Among the three criteria used as single alternatives, the differences are not nearly so great. For instance, on the cumulative basis the range was between 7.0 million and 8.0 million retirees by the labor force withdrawal criterion and the pension income criterion respectively. On the current status basis the spread was even smaller: from 6.2 million (subjective criterion) to 6.8 million (pension income criterion). Thus, the overall spread of estimates was 29 percent.

(3) As the foregoing data suggest, there is substantial overlap among

the three criteria: about 70 percent of the men who are retired by any criterion are retired by all three. Nonetheless, pronounced differences appear between those retired by all three criteria and those retired by only one or two. The former tend to be older, in poorer health, less likely to be working, and less well off both economically and psychologically.

(4) Age at retirement varies somewhat depending upon the criterion used. For instance, among men who were between the ages of 65 and 71 in 1978, 84 to 90 percent had retired, depending on the criterion used: early retirees (prior to age 65) as a proportion of all retirements amounted to 61 percent in the case of the subjective retirees and 69 percent for each of the other two categories. Among the subjective retirees in this age group one-fourth (27 percent) had retired very early (prior to 62), an equal proportion (27 percent) at age 65, and 10 percent at higher ages.

(5) On the basis of these findings we believe it is not possible to suggest an optimal definition of retirement; the appropriate criteria of retirement necessarily depend upon the purpose of the analysis. For example, on the issue of retirement-as-an-event versus retirement-as-a-status, if one opts for the latter it becomes meaningless to ask about post-retirement labor market activity. On the other hand, this concept of retirement does permit the "tracking" of individuals and determination of the extent of movement into and out of "retirement." As to the criterion of retirement to be used, each has advantages and disadvantages. Using the pension income criterion results in excluding middle-aged individuals who are forced out of the labor market by poor health without qualifying for retirement or disability benefits, thus presenting a more sanguine view of the circumstances of retired individuals than reality warrants. Use of the labor force withdrawal criterion understates the extent of post-retirement labor market activity. Using a

subjective criterion perhaps relies too heavily on self-perception and gives insufficient weight to objective conditions.

Reason for Retirement and Post-retirement Labor Market Activity (Chapter 2, Sections I and II)

(1) Of the more than six million men age 59 to 73 in 1980 who had retired between 1967 and 1978 (using the subjective definition of retirement), fewer than 5 percent had been unwillingly removed from jobs by mandatory retirement, in contrast to more than one-third whose retirement appears to have been induced by poor health. A majority, however, had retired completely voluntarily.

(2) Irrespective of reason for retirement, only a minority of the men manifested any interest in labor market activity as of 1980. Sixteen percent were either working or looking for work in the survey week and 23 percent had worked in the past year; of the remainder, only one percent explained their absence from the labor market by a perception that no jobs were available, and only 15 percent said that they would (3 percent) or might (12 percent) take a job, in response to a hypothetical job offer. Thus, at best only two-fifths of the total group of retirees are in any meaningful sense available for work; the remainder either have health problems that discourage labor market activity or simply do not choose to work.

(3) The minority of retirees who were in the labor force in 1980 differed significantly in a number of respects from the majority who were not. A multivariate analysis demonstrates that the likelihood of post-retirement labor market activity declines precipitously with advancing age even within the relatively narrow span of years from 54 to 73, and with increasing severity of health problems. Men who had been in professional and

managerial jobs prior to their retirement, and those who expressed relatively unfavorable attitudes toward retirement, had above average participation rates. On the other hand, retirees who received more income (exclusive of their own earnings) were less likely than others to be holding jobs or seeking work.

Post-retirement Financial Status (Chapter 2, Section III)

(1) Nine out of ten retirees receive Social Security (or Railroad Retirement) benefits, and three-fifths receive other pensions, predominantly from private employers but also from public sector employers and from unions. Nevertheless, substantial proportions have one or more additional sources of income: wage or salary income (17 percent), self-employment earnings (10 percent), wife's earnings (20 percent), public assistance (8 percent), and other sources (64 percent). Thus, only 9 percent of the retirees live on pension income alone, although this source accounted for almost three-fifths of the retirees' average family income of $15,300 in the year preceding the 1980 survey date.

(2) The average proportion of pre-retirement earnings represented by public and private pensions (replacement rate, expressed in terms of dollars with 1980 purchasing power) is 47 percent, but there is considerable variation around this mean. For about one-seventh of the retirees the replacement rate is under 25 percent; for more than one-tenth it is 70 percent or higher. Men with Social Security benefits alone have an average replacement rate of 44 percent; those with both Social Security and other pensions have a rate of 51 percent; those with only pensions other than Social Security (primarily government workers) have a rate of 42 percent. Replacement rates of persons who receive Social Security benefits vary dramatically with pre-retirement

earnings levels, because of the subsidy inherent in the Social Security benefit formula. Only at the low end of the income scale (earnings of $10,000 or less in terms of 1980 dollars) is the replacement rate sufficient to maintain the pre-retirement standard of living during retirement, when reductions in taxes and expenses attributable to working are taken into account.

(3) Replacement rates also vary with other characteristics of retirees. They are higher for married than for unmarried men, reflecting the benefit provisions of the Social Security program, and lower among men whose pre-retirement jobs were in manufacturing and trade than in transportation and utilities, reflecting differences in the extent and character of private pension coverage.

(4) When the course of median real family income of married retirees is examined over time, two trends are evident. First, the level of 1980 income is higher for more recent than for earlier retirees. Second, for each cohort of retirees real family income has moved downward over time, resulting largely from decreased post-retirement labor force participation of both retirees and their wives as time goes on.

(5) Whatever their actual income, a very large majority of retirees profess to be able to "get by" on their income, although there are pronounced variations between nonmarried and married men in favor of the latter and even larger ones between blacks and whites. Nonetheless, for the married men of both races, 59 percent report that they do better than just get by, while 9 percent assert that they "cannot make ends meet." By way of comparison, the corresponding proportions of nonretired men are 72 percent and 4 percent.

Variation in Leisure Activities (Chapter 3, Section I)

(1) For all members of the sample--retired and nonretired alike--the men spent on average about 20 hours a week in 1978 on six leisure activities--exercise, reading, hobbies, home maintenance, visiting, and volunteer work.

(2) Participation rates--which are invariably higher for whites than for blacks--range from an overall average of 88 percent in the case of reading to 20 percent in the case of volunteer work.

(3) As would be expected, retirees as a group devote significantly more time to these activities in the aggregate than nonretired men; they also have significantly higher participation rates in all activities except visiting and home maintenance.

(4) Health, occupational level, and family income all bear positive relationships with the pursuit of purposeful leisure time activity. The fact that occupational level and family income have independent effects suggests that the type of work men do is related to leisure pursuits not only through income but through the character of interests that are associated with different occupational levels.

Evaluation of the Retirement Decision (Chapter 3, Section II)

(1) A very substantial majority of retirees report that their experience in retirement has equaled or surpassed their expectations. On the other hand, about one in five of the whites and one in four of the blacks admit that they have been disappointed.

(2) The proportions vary considerably according to the reason for retirement. Men who retired for health reasons have the largest proportion--about one-third--whose experience has been worse than their expectations; among the voluntary retirees the proportion is much smaller, but has

manifested a mild upward trend when the men's responses in 1976, 1978, and 1980 are compared.

(3) Men who retired early in the 1967-1976 decade had somewhat more negative responses in 1980 than those who retired later. The trend is not inconsistent with the development of a "disenchantment" phase of retirement, but cannot without more refined analysis be interpreted as confirming the phenomenon.

(4) The proportion of retirees who retrospectively endorse the age at which they originally retired is very large, but there is clear evidence of a decreasing trend in the responses between 1976 and 1980--from three-fourths to two-thirds. Of those who would now do things differently, about four times as many would opt for later than for earlier retirement, although both of these responses increased in relative frequency between 1976 and 1980.

Life Satisfaction (Chapter 3, Section III)

(1) Life satisfaction among retirees varies markedly and systematically according to a variety of characteristics. In particular, satisfaction varies directly with health, financial status (income and assets), extent of leisure time activities, participation in the labor market, and being married.

(2) Other things being equal (including current state of health), men who retired for health reasons manifest significantly lower levels of satisfaction than voluntary retirees and, as a matter of fact, even those who were mandatorily retired.

(3) The more favorable the retiree's attitude toward retirement in the abstract (as measured in 1978), the more highly satisfied with life he was likely to be (as measured in 1980).

(4) With all other factors controlled, there is no difference in level

of life satisfaction between white and black retirees.

(5) The impact of retirement on level of life satisfaction has been measured by examining the difference in satisfaction between retired and nonretired men when all of the factors associated with variations in life satisfaction are controlled. This cross-sectional approach has acknowledged limitations as compared with a longitudinal design and, moreover, produces different results depending on the specification of the model. Using the same specification employed for analyzing variation in life satisfaction of retirees, retired men are found to have lower life satisfaction than their nonretired counterparts, but the difference is statistically significant only at the .10 level. With family income uncontrolled, on the other hand, the difference is significant at the 5 percent level, and we recognize that retirement almost always entails a reduction in family income. We opt to reserve judgment on the issue pending a more thorough longitudinal analysis that will include data from the 1981 interviews.

Chapter 1

Introduction: The Volume of Retirements, 1966-1978*

I. INTRODUCTION

Two factors have made retirement an increasingly important public policy issue in recent years--(1) the dramatic increase and subsequent reduction in fertility in the post-World War II period and (2) the persistent trend toward early retirement among males. The first of these phenomena portends a substantial increase in the proportion of the population 65 and over early in the next century as the baby boom generation reaches their 60s. The percentage of the population 65 and over, which has risen from 8 percent to 11 percent between 1950 and 1980, is projected to increase to anywhere between 17 and 20 percent by 2025, depending primarily upon what assumptions are made about the future course of fertility rates (Clark and Spengler, 1980, p. 25).

The increasing popularity of early retirement exacerbates the effects of the demographic trends on the extent of adult dependency. The number of workers paying into the United States Social Security system for every 100 persons drawing benefits, which dropped from 400 to 320 between 1965 and 1980, may fall to as low as 200 by 2025 (President's Commission on Pension Policy, 1981, p. 23). These trends have led to growing doubts about society's willingness and/or ability to bear the resulting burden. At the same time, they have created the specter of labor shortages, because using "intermediate" assumptions about the future trend of fertility rates the proportion of the population 18 to 44 is expected to shrink from the current level of 42 percent to 35 percent by the end of the first quarter of the next century (Population

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*We acknowledge with gratitude the contribution that our colleague Gilbert Nestel has made to the design of the empirical work in this chapter.

Estimates and Projections, Table C, p. 4).

The importance of the phenomenon of retirement from the perspective of public policy invites a careful scrutiny of its nature. There is already an extensive body of literature on the determinants of the retirement decision and on aspects of post-retirement experience, including valuable literature reviews by Friedman and Orbach (1974), Kingson (1981), Larson (1978), Mitchell and Fields (1981), Morgan (1981), and Parker (1982). However, many of the studies of post-retirement experience have been based on small and nonrepresentative samples and/or on cross-sectional data. Those that have used longitudinal data sets have tended to focus on limited aspects of post-retirement experience, e.g., life satisfaction (Beck, 1982), earnings replacement rates (Fox, 1982), extent of post-retirement labor market activity (Motley, 1978). The most comprehensive longitudinal analysis of the consequences of retirement (Streib and Schneider, 1971) is based on data that are over 20 years old and that emerged from a nonrepresentative sample of retirees.

In this monograph we empirically explore alternative definitions of retirement and begin a systematic analysis of its economic and social-psychological consequences, using data that have become available through 1980 from The National Longitudinal Surveys of Labor Market Experience of older men (NLS). The monograph is in a sense a progress report; data from the 1981 NLS survey that have just become available will permit us to deepen the analysis in a number of respects--particularly by allowing an examination of the influence of retirement on health and by providing more sophisticated measures of post-retirement psychological well-being.

Plan of the Monograph

In the remainder of this chapter we describe the nature of the data on which the several analyses rest, and then turn to an exploration of the concept of retirement; several operational definitions are developed, and the longitudinal records of members of the sample are used to ascertain how the numbers and characteristics of "retirees" vary depending on what definitional criteria are used. Chapter 2 examines the economic aspects of post-retirement experience: the extent and character of post-retirement labor market activity and the characteristics of respondents that are associated with it; the relationship between post-retirement and pre-retirement labor market activity for those who continue to work; and, for all retirees, the sources of post-retirement income, the correlates of variation in the ratio of pension income to pre-retirement earnings, and the perceived adequacy of post-retirement income. Chapter 3 relates to noneconomic aspects of post-retirement experience. Utilizing measures of leisure time activities, attitudes toward retirement, and satisfaction with various aspects of life, we focus principally on two issues: the effect of retirement on leisure activities and life satisfaction and the sources of variation in these measures among retirees.

Character of the NLS Data[1]

The NLS data set is invaluable for purposes of exploring these questions. To begin with, the over-sampling of black men makes possible statistically reliable estimates of racial differences in all aspects of the study. Moreover, the longitudinal design means that for the nationally representative sample of men under consideration there is periodic information on many dimensions of work activity, income, and attitudes from the time the vast majority were full-year workers to the time when about three-fifths were retired. Thus, for most of the men who had retired by 1980 the records cover at least several years prior and several years subsequent to retirement. This allows an examination of the factors leading to retirement on the basis of data that are not contaminated by the possibility of post-hoc rationalization. That is, evidence on reasons for retirement does not rest exclusively on retrospective responses of men who have already retired, but can be inferred from measurements of health, attitudes, and labor market experience made while the men were still working. Finally, the longitudinal data allow the men's post-retirement experience and attitudes to be related to various facets of their pre-retirement lives. The NLS data set will now be described in somewhat greater detail.

A representative sample of the United States civilian population of males between the ages of 45 and 59 was drawn by the U.S. Bureau of the Census in 1966. Blacks were overrepresented in a ratio of three or four to one in order to permit reliable interracial comparisons. The total sample numbered 5,020: 3,518 whites and 1,420 blacks.[2] The study was originally intended to run for only five years, but was later extended first to ten and then to fifteen years. These extensions account for some of the limitations of the data from the perspective of the present study. Because the interviews were expected to end when the oldest members of the sample were 64 years of age, not much thought was given at the outset to issues related to post-retirement behavior. Indeed, the first four volumes of reports on the data appeared under the title The Pre-Retirement Years.[3] Nevertheless much of the information collected in the early years is useful for purposes of the present study, and questions relating to retirement experience were added to later surveys as it became clear that many respondents would retire before the surveys ended.

Interviews were conducted first in 1966 and again in 1967, 1969, and 1971. In 1968 a brief mailed questionnaire was administered. During each of the second and third five-year periods there were biennial telephone interviews (1973, 1975, 1978 and 1980) and longer face-to-face interviews at the end of the period (1976 and 1981). The 1981 data became available after the completion of the first draft of this monograph. While it is neither possible nor necessary to present a complete catalogue of the information that has been accumulated for each respondent, it is useful to mention the major categories of data that will play important roles in the subsequent analysis.

Retirement status. The data make it possible to define retirement in terms of (1) the respondent's subjective perception of his status, (2) the receipt of Social Security or other pension income, or (3) partial or complete withdrawal from the labor force. In each survey all respondents were asked at what age they expected to stop working at a regular job.[4] One of the precoded responses to this question was "already stopped," and persons who responded in this way have been classified as subjectively retired.[5] Each survey also obtained information on sources of income, identifying specifically retirement benefits under the Social Security or Railroad Retirement systems, other pension income, and disability payments from the Social Security program or other sources. Individuals who receive any of these kinds of benefits have been classified as retired on the basis of the income criterion.[6] Finally, each survey elicits information on number of weeks of labor force participation in the preceding twelve months and on the number of hours the individual usually worked during weeks of employment. With this information it is possible to classify individuals as retired on the basis of complete or partial (e.g., working 1,000 or fewer hours) labor market withdrawal.

Although it is easy to ascertain whether an individual has retired on the basis of each of these criteria, problems arise in pinpointing the date (and therefore the age) of retirement, particularly when it occurred between interviews conducted two years apart. The procedures used to ascertain date of retirement are too complex to describe in detail; however, we have diligently used all of the clues provided by the data.[7]

Work experience. The detailed information on work experience that has been collected in each survey permits comparisons between pre-retirement and post-retirement labor market activity. For example, occupation, industry, type-of-worker status, earnings, and length of service in the respondent's pre-retirement job are readily available, as is the regularity of employment in the preceding year or, indeed, over the entire 12-year period. Whether there is employment and/or unemployment after retirement can also be ascertained, and any post-retirement employment can be compared with pre-retirement employment from the standpoint of intensity (hours per year), occupational assignment, industrial affiliation, and earnings.

Income. The questions on amount and sources of income included in each survey permit a comparison of the financial circumstances of respondents and their families before and after retirement and also allow investigation of the extent to which real incomes are maintained during retirement. More specifically, we are able to ascertain what proportion of pre-retirement earnings are replaced by Social Security and pension income and to analyze the sources of variation in these replacement rates among individuals as well as their trend over time.

Noneconomic variables. The respondent's health condition has been measured in each survey by asking if any health condition limits the kind or amount of work he can do. The 1976 survey also contained a detailed set of questions designed to ascertain the character and extent of functional limitations the respondent suffered (e.g., walking, lifting, stooping, seeing, etc.). Information on leisure time activities was collected in the 1978 survey; from this it is possible to examine the extent of variation between retired and nonretired men in the amount of time spent on such pursuits as sports or exercise, hobbies, maintenance work around the home, reading, visiting, and unpaid volunteer work.

The NLS data set includes a number of attitudinal variables that are useful in the analysis. Degree of satisfaction with current job has been asked in each survey, affording a measure of this variable in both the pre-retirement and post-retirement job. Beginning with the 1976 survey, a series of questions measure the degree of satisfaction the respondent reports with various aspects of his life, and a series of questions on attitude toward work and retirement began in 1978. These measures permit useful comparisons between retired and nonretired individuals, as well as interpersonal and intertemporal comparisons of the attitudes of retirees, and thus shed light on the character of the psychological adjustment to retirement.

II. ALTERNATIVE MEASURES OF RETIREMENT, 1966-1978

The term retirement is ambiguous; at one extreme it implies complete cessation of all labor market activity at some reasonably advanced age; at the other it connotes simply the receipt of Social Security or other pension income. Although the problems that this ambiguity create for measuring and analyzing retirement have been recognized (Atchley, 1976, p. 7; Gustman and Steinmeier, 1981, p. 11), only two empirical studies (Gustman and Steinmeier, 1981; Murray, 1979) have come to our attention that deal with the matter, and neither of these focuses primarily on the effects of alternative definitions on the numbers and characteristics of retirees. That is the question addressed in this section.

Irrespective of how the term is defined, the extent of retirement can be quantified from several perspectives over the period under consideration. First, one can view the sample prospectively as of 1966 and inquire how many men between the ages of 45 and 59 in that year had retired by 1978. Alternatively, viewing the sample retrospectively as of 1978, one can ask how many men 57 to 71 in that year had retired over the preceding twelve years. The difference between these two counts, of course, reflects the number of retirements among men 45 to 59 in 1966 who had died by the time of the 1978 survey. From each of these perspectives, it is possible either (1) to examine the retirement status of the men in each of the survey years or (2) to classify them by retirement status "cumulatively," i.e., regarding as "retired" anyone who had satisfied the criterion of retirement at any time during the period. In view of the fact that estimates of these kinds, to the best of our knowledge, have hitherto not existed, it appears useful to present the data in all these forms.

Table 1.1 shows the size of the sample for the several components referred to above, classified by race and age. Of the original 1966 sample of 5,020, 82 persons represented races other than black or white, leaving a total of 4,938 black and white men who were interviewed in 1966. Of these, 776 had disappeared from the sample by 1978 by virtue of their refusal to be interviewed or being untraceable. An additional 987 men had died by 1978, leaving 3,175 respondents who were interviewed at that time. Because the attrition from the sample for reasons other than death appears to be substantially random, and because the sampling weights of those interviewed have been adjusted each year to compensate for differences in attrition by race, education, and geographic mobility, the respondents interviewed in 1978 may be regarded as representative of the noninstitutionalized civilian population of white and black men 57 to 71 years of age in that year.[8] The data relating to retirement should therefore reflect rather faithfully both the incidence of retirement and the character of the retirement experience of the cohort of men within that age range as of 1978.

Table 1.1 Components of NLS Sample, by Race and 1966 Age, 1966 and 1978

Component of sample	Whites and blacks			Whites			Blacks		
	Total	45-52	53-69	Total	45-52	53-59	Total	45-52	53-59
Men 45-59, 1966[a]	4,162	2,339	1,823	2,914	1,641	1,273	1,248	698	550
Decedents, 1966-1978	987	448	539	619	274	345	368	174	194
Men 57-71, 1978	3,175	1,891	1,284	2,295	1,367	928	880	524	356

[a] Includes only those men who were reinterviewed in 1978.

Table 1.2 shows the retirement status of the 1966 sample by the three criteria in each survey year between 1966 and 1978.[9] Several aspects of the data deserve comment:

1. With only few aberrations, the proportion of the sample that is retired increases continuously and very substantially irrespective of which of three criteria is used, from about one-eighth or less in 1966 to over one-half in 1978.
2. In almost every year the pension criterion yields the highest measure of retirement and the subjective measure the lowest. The differences fluctuate somewhat erratically; by 1976 and 1978 the subjective and participation criteria produce almost identical proportions of retirees, while the proportion retired by the pension

Table 1.2 Retirement Status of Sample, by Criterion and by Survey Year, 1966-1978

(Percentage distributions)

Retirement status	1966	1967	1969	1971	1973	1975	1976	1978
Sample n[a]	4162	4038	3872	3734	3567	3407	3300	3175
Total population (thousands)	15048	14665	14146	13767	13255	12748	12390	12003
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Not retired by any criterion	84.1	82.3	79.4	73.4	68.6	56.1	46.4	38.3
Retired by one or more criteria	15.9	17.7	20.6	26.6	31.4	43.9	53.6	61.7
Retired by only one criterion	10.9	12.3	11.6	12.3	12.3	12.5	14.5	8.2
Participation	2.3	2.4	2.4	2.7	6.2	5.4	1.7	0.7
Pension	8.0	9.7	8.4	9.1	4.5	5.2	9.7	5.5
Subjective	0.6	0.2	0.8	1.5	1.6	1.9	3.1	2.0
Retired by two criteria	2.5	4.3	3.9	4.6	11.6	12.4	8.1	8.7
Pension and participation	1.0	3.0	1.3	1.2	2.6	3.6	2.4	3.7
Subjective and participation	1.3	1.2	2.5	3.0	4.3	6.7	4.9	2.3
Pension and subjective	0.2	0.1	0.1	0.4	2.7	2.1	1.8	2.7
Retired by all criteria	2.6	1.0	5.1	8.8	9.5	19.0	30.0	44.7
	Total percent retired by each criterion alone							
Subjective	4.7	2.5	8.5	13.7	18.1	29.7	39.8	51.7
Participation	7.2	7.6	10.1	15.7	22.6	34.7	39.0	51.4
Pension	11.8	13.8	14.9	19.5	19.3	29.9	43.9	56.6

[a] The sample in 1966 includes all men interviewed in 1978 plus the decedents between 1966 and 1978. The reduction in sample size in the years after 1966 reflects primarily the number of deaths, but is also affected by the (relatively few) cases of men who were not interviewed in a particular year but who had re-entered the sample by 1978.

criterion is four or five percentage points higher.

3. There is a strong downward trend after 1973 in the ratio of men retired by one or two criteria to those retired by any criterion. The implication is that the passage of time strengthens the "signs" of retirement for many individuals, although we cannot be certain how much this reflects reality and how much it simply reflects lags in some of the data.

4. Subjectively reported retirement almost never is the sole indicator of the retired status. In no year did the proportion retired by their own perception but by no other criterion exceed 6 percent of those who were retired by any criterion. In contrast, the corresponding percentage for men retired only by the pension criterion exceeded 20 in four years and the percentage for men who were retired only by the labor force withdrawal criterion fell between these two values.

We turn now to an examination of the "cumulative" retirement status of the men over the full twelve-year period. In Table 1.3 each individual is classified according to whether he met any of the retirement criteria at any time during the period under review. The difference between the column labeled "1966 sample" and the two columns that are labeled "1978 sample" is that the former includes the men who died between 1966 and 1978 whereas the latter do not. The first, in other words, views the cohort of men 45 to 59 years old in 1966 and asks about the number who were retired as of that year or at any time between then and 1978; the next two columns summarize the retirement history of the cohort of men who were age 57 to 71 in 1978. For this group, the cumulative status (Column 2) is compared with the current status as of 1978 (Column 3).

Table 1.3 Retirement Status of 1966 Sample and 1978 Sample, by Retirement Criterion

(Percentage distributions)

Retirement status	1966 sample	1978 sample	
		Cumulative status	Status in 1978
Sample n	4162	3175	3175
Total population (thousands)	15048	12003	12003
Total percent	100.0	100.0	100.0
Not retired by any criteria	28.5	26.2	38.3
Retired by one or more criteria	71.5	73.8	61.7
Retired by only one criterion	14.6	13.4	8.2
Participation	4.2	3.2	0.7
Pension	8.5	8.2	5.5
Subjective	1.9	2.0	2.0
Retired by two criteria	10.1	9.5	8.7
Pension and participation	2.6	1.9	3.7
Subjective and participation	2.8	3.2	2.3
Pension and subjective	4.7	4.4	2.7
Retired by all criteria	46.8	50.9	44.7
	Total percent retired by each criterion alone		
Subjective	56.2	60.3	51.7
Participation	56.4	58.3	51.4
Pension	62.6	66.5	56.6

The retirement status of slightly over three-fourths of the men can be defined unambiguously: 47 percent of the 1966 sample were retired by all three criteria, and 29 percent were not retired by any.[10] The retirement status of the remaining 24 percent depends on the definition of retirement. Looking at this problem of definition in a somewhat different way, we can say that of the men in the 1966 sample who were retired by any criterion, about two-thirds were retired by all three; one-fifth by only one; and 14 percent by two. As was shown in the annual data in Table 1.2, the subjective criterion is least likely to occur in isolation: of all those retired by any criterion, only 3 percent were so classified on the basis of the subjective criterion alone.

Comparison of the second and third columns of Table 1.3 demonstrates dramatically that the count of the "retired" depends not only on what criterion of retirement is used, but whether "retirement" is conceived as an event (i.e., "once retired, always retired") or a current status (i.e., "what is the individual doing in a particular year?"). From the former point of view, almost three-fourths of the 1978 sample had manifested retirement by at least one of our criteria at some time over the preceding 12 years, and one-half had retired by all three. However, if one asks how many currently met the retirement criteria as of the 1978 survey, the corresponding proportions are only 62 percent and 45 percent. For each criterion separately, current (1978) status yields a proportion of retirees 7 to 10 percentage points lower than that indicated by the cumulative record.

Comparison of Retirement Rates, 1966 and 1978 Samples

Tables 1.4 and 1.5 decompose the data on retirement status by race, age, and age at retirement by each of the three criteria in turn. For the 1978 sample the men are divided into two age categories as of that year: 57-64 and 65-72. The advantage of this division is that it permits us to ascertain the proportion of early retirees among a group of men all of whose members have achieved age 65. For the 1966 sample, the age division is the same, but it is expressed in terms of the men's ages in 1966 rather than 1978.

The differences between Tables 1.4 and 1.5 (the 1966 and 1978 samples) are instructive. First, by every criterion of retirement and in virtually every race and age category, the proportion of the 1966 sample that retired is smaller than the corresponding proportion of the 1978 sample. The reason for this is that almost one-fourth of the 1966 sample had died by 1978,[11] and only those who had retired prior to death could have been included among the retirees. As would be expected, the disparity between the two samples is greater in the older age group, in which a majority of the deaths had occurred. For instance, by the subjective criterion, 40 percent of the younger age group in the 1966 sample was retired while the proportion in the 1978 sample was 42 percent. In contrast, in the older group the corresponding proportions were 77 and 88 percent.

These differences are somewhat surprising, for to the extent that death is preceded by lengthy illness, one would expect decedents to have retired prior to death, leading us to observe a higher proportion of retirees in the 1966 than in the 1978 sample. The observed pattern indicates that a substantial portion of the decedents had died prior to retirement,[12] a conclusion that is confirmed by Table 1.6, which classifies decedents by retirement status and age of retirement. Comparison of Tables 1.5 and 1.6 reveals that although 60 percent of the 1978 sample were retired (by the subjective criterion), only 39 percent of the decedents had retired by the time of their death. The age difference in retirement rate is far smaller for

Table 1.4 Age at Retirement, by Age in 1966, Race, and Criterion of Retirement: Respondents Interviewed in 1978 and Decedents 1966-1978

Retirement status and age at retirement	Total			Whites			Blacks		
	Total	45-52	53-59	Total	45-52	53-59	Total	45-52	53-59
Sample n	4162	2339	1823	2914	1641	1273	1248	698	550
Subjective									
Total population (millions)	15.0	8.5	6.6	13.7	7.7	6.0	1.3	0.8	0.6
Total percent	100	100	100	100	100	100	100	100	100
Percent not retired	44	60	23	44	60	23	45	60	24
Total retired (millions)	8.4	3.4	5.1	7.7	3.1	4.6	0.7	0.3	0.5
Total percent	100	100	100	100	100	100	100	100	100
Under 62	52	82	32	52	82	32	54	84	32
62-64	27	18	34	27	18	33	30	16	40
65	15	0	25	15	0	25	10	0	18
66+	6	0	10	6	0	9	6	0	11
Receipt of pension income									
Total population (millions)	15.0	8.5	6.6	13.7	7.7	6.0	1.3	0.8	0.6
Total percent	100	100	100	100	100	100	100	100	100
Percent not retired	37	51	19	37	51	19	40	55	18
Total retired (millions)	9.4	4.2	5.3	8.6	3.8	4.9	0.8	0.4	0.5
Total percent	100	100	100	100	100	100	100	100	100
Under 62	60	85	40	60	86	41	58	83	38
62-64	24	15	32	24	15	31	27	17	35
65	8	0	15	8	0	15	7	0	13
66+	7	0	13	7	0	13	8	0	14
Labor force withdrawal									
Total population (millions)	15.0	8.5	6.6	13.7	7.7	6.0	1.3	0.8	0.6
Total percent	100	100	100	100	100	100	100	100	100
Percent not retired	44	60	23	44	60	24	38	53	19
Total retired (millions)	8.4	3.4	5.1	7.7	3.1	4.6	0.8	0.4	0.5
Total percent	100	100	100	100	100	100	100	100	100
Under 62	61	85	45	60	85	44	70	88	54
62-64	23	15	28	23	15	28	19	11	24
65	7	0	12	7	0	12	5	0	9
66+	9	0	16	10	0	16	7	0	13

able 1.5 Age at Retirement, by Age, Race, and Criterion of Retirement: Respondents Interviewed in 1978

etirement tatus and age t retirement	Total			Whites			Blacks		
	Total	57-64	65-72	Total	57-64	65-72	Total	57-64	65-72
ample n	3175	1891	1284	2295	1367	928	880	524	356
ubjective									
Total population (millions)	12.0	7.1	4.9	11.1	6.5	4.5	0.9	0.6	0.4
Total percent	100	100	100	100	100	100	100	100	100
Percent not retired	40	58	12	40	59	12	40	56	13
Total retired (millions)	7.2	3.0	4.3	6.7	2.7	4.0	0.5	0.3	0.3
Total percent	100	100	100	100	100	100	100	100	100
Under 62	48	80	27	48	80	27	48	80	21
62-64	29	20	35	29	20	35	33	20	45
65	16	0	27	17	0	28	12	0	22
66+	7	0	11	6	0	11	7	0	12
eceipt of pension income									
Total population (millions)	12.0	7.1	4.9	11.1	6.5	4.5	0.9	0.6	0.4
Total percent	100	100	100	100	100	100	100	100	100
Percent not retired	33	50	10	33	50	10	35	52	8
Total retired (millions)	8.0	3.6	4.4	7.4	3.2	4.0	0.6	0.3	0.4
Total percent	100	100	100	100	100	100	100	100	100
Under 62	56	83	34	56	84	34	50	79	26
62-64	27	17	35	26	16	34	32	21	41
65	9	0	17	9	0	17	8	0	14
66+	8	0	15	8	0	15	10	0	19
abor force withdrawal									
Total population (millions)	12.0	7.1	4.9	11.1	6.5	4.5	0.9	0.6	0.4
Total percent	100	100	100	100	100	100	100	100	100
Percent not retired	42	59	16	42	60	16	36	51	13
Total retired (millions)	7.0	2.9	4.1	6.4	2.6	3.8	0.6	0.3	0.3
Total percent	100	100	100	100	100	100	100	100	100
Under 62	56	83	38	56	82	38	64	85	45
62-64	25	18	31	26	18	31	21	15	28
65	8	0	13	8	0	13	6	0	11
66+	11	0	18	11	0	18	9	0	17

Table 1.6 Distributions of Decedents, 1967-1978, by Race, Age in 1966, Subjective Retirement Status Prior to Death, and Age at Retirement

Retirement status and age at retirement	Total			Whites			Blacks		
	Total	45-52	53-59	Total	45-52	53-59	Total	45-52	53-59
Sample n	987	448	539	619	274	345	368	174	194
Total (thousands)	2750	1217	1533	2404	1046	1358	345	171	174
Percent not retired	61	69	56	62	69	57	58	70	46
Total retired (thousands)	1059	378	681	913	327	586	146	51	94
Total percent	100	100	100	100	100	100	100	100	100
Under 62	76	97	65	76	97	64	76	100	63
62-64	17	3	24	17	3	24	17	0	27
65	6	0	10	7	0	10	4	0	5
66 or older	1	0	2	1	0	1	3	0	5

the decedents than for members of the 1978 sample. Among the former, the retirement rate was 31 percent for those 45-52 and 44 percent for those 53-59; among the 1978 sample the corresponding proportions were 42 percent and 88 percent.

Age at Retirement

Turning now to the subset of each sample that has retired, it is clear that early retirement is more prevalent in the 1966 than in the 1978 sample. By every criterion, and in every race-age group, a larger proportion of the 1966 sample retired prior to age 62 and a smaller proportion at age 65 or older, implying that the decedents who did retire were far more likely to have retired early than were the surviving members of the sample. As shown more clearly by the data in Table 1.6, three-fourths of the retirees who subsequently died had retired prior to age 62, in contrast with 48 percent of the 1978 sample. At the other extreme, 23 percent of the 1978 sample, in contrast with only 7 percent of the decedents, had retired at or beyond age 65. These differences are even more pronounced in the case of the older segment of the sample, i.e., the men who were 53-59 in 1966. One-fourth of this age group in the 1978 sample, in contrast to 65 percent of the decedents, had retired before age 62. Almost two-fifths of the survivors and 12 percent of the decedents had retired at 65 or older.

Variations in Incidence of and Age at Retirement by Criterion of Retirement

Measures of the incidence of retirement and the age at retirement differ depending on which definition of retirement is used. To explore these differences we rely on data for the 1978 sample (Table 1.5), for the patterns revealed by Tables 1.4 and 1.5 are fairly similar. For retirement status, the subjective criterion and the labor force withdrawal criterion produce quite comparable results. Overall, about three-fifths of the sample is retired according to each of these criteria, and in none of the four age-race categories do the two measures differ by more than five percentage points. Use of the pension criterion yields a somewhat higher retirement rate--two-thirds overall and among whites. Among black men, on the other hand, the retirement rate as measured by receipt of pension income is almost identical to that measured in terms of labor force withdrawal and somewhat above the rate measured by self-reported status.

In interpreting the data on age at retirement, keep in mind that for each criterion the age at retirement is the age at which that criterion was first met. For example, consider a man who was 57 years old in 1966, who reported in 1967 that he "had already stopped working at a regular job," whose reported hours of labor force participation dropped below 1,000 for the first time in the 12 months preceding the 1973 survey, and who first received Social Security or pension income in the 12 months prior to the 1975 interview. This individual would be classified as retired by all three criteria, but his retirement age would be under 62 by the subjective criterion, between 62 and 64 by the labor force withdrawal criterion, and 65 by the pension criterion.

The receipt of pension income and labor force withdrawal produce quite similar distributions of age of retirement for the total sample and for whites, while the subjective criterion produces a somewhat smaller proportion of very early retirees, i.e., under 62, and a somewhat higher proportion of persons who retire at 65 or older. Among blacks, the pattern is substantially different. Labor force withdrawal produces by far the largest proportion of very early retirements: 64 percent as compared with 50 percent on the basis of the pension criterion and 48 percent on the basis of the subjective criterion. The percentage of those who retire at 65 or older is smallest in terms of labor force withdrawal, although in this case the percentages are not very dissimilar: 15 percent as compared with 18 or 19 percent by the other two criteria.

Of those members of the 1978 sample who had not yet achieved age 65, not more than one-half had retired, but the vast majority of the retirees--four-fifths--had retired prior to age 62 by all three criteria. Considering those who had already reached age 65, between 84 and 90 percent had retired, depending on the criterion used; among these the proportion of very early retirees was about one-fourth by the subjective criterion, one-third by the pension criterion, and slightly under two-fifths by the labor force withdrawal criterion. All early retirements among this age group (i.e., retirement prior to age 65) accounted for 62 percent by the subjective criterion and 69 percent by each of the other two.

Variation in Characteristics of Retirees, by Criterion of Retirement

To what extent do the characteristics of retirees differ depending upon how one defines retirement? One way to approach this issue would be to compare the characteristics of all men meeting one of the criteria with those of men meeting each of the other two in turn. The problem with this approach, however, is that the degree of overlap among the three criteria is so substantial that differences among them would be obscured. The alternative we have chosen is to compare the characteristics of men who are retired by only one criterion and by each combination of two criteria with those (the vast majority) who meet all three criteria and with nonretired men, i.e., those who meet none of them (Table 1.7).[13] The disadvantage of this approach is that some of the categories have small sample sizes, making generalization hazardous; nevertheless, the smallest category contains 59 cases and the differences are generally sufficiently large that one can accept the figures with a reasonable degree of assurance.

The clearest and most striking conclusion to be drawn from Table 1.7 is that men who are retired by all three criteria differ very profoundly from those who are retired on the basis of only one or two of them. They are, to begin with, an older group, and many of the other differences stem from this fact. Almost two-thirds of them are at least 65 years old (in 1978) as compared with proportions ranging between 9 and 40 percent for the other categories. Second, they are more likely than men in the other categories to have health problems. Of the 21 relevant cells of the table, there is only one in which men retired by all criteria are not in a distinctly unfavorable situation relative to all the others. For instance, fewer than three of ten of them report no physical or mental impairments as compared with 37 to 56 percent in the other categories of retirees. Third, they are far less likely to be working in the post-retirement period. Only four percent of them worked as many as 1,000 hours in the 12 months prior to the 1978 survey, while the corresonding fractions of the other categories ranged between 34 and 96 percent. Mean hours of work were only 700 for the all-criteria group, but not below 1,200 in any other. Fourth, doubtless as a result of the factors already mentioned, their total family income is below that of the other groups of retirees, in most cases by substantial amounts. Their mean family income of $11,600 in the year preceeding the 1978 survey date compared with $24,300 for men retired on the basis of the subjective and pension income criteria and $13,300 for those retired on the basis of the subjective and labor force withdrawal criteria. Finally, although the differences are not as great as in the case of the characteristics already described, men retired by all three

Table 1.7 Selected Characteristics of Nonretired Men and of Retired Men, by Criterion of Retirement

Characteristic	Not retired by any criterion	Retired: all criteria	Retired: one only			Retired: two criteria		
			Pension income	Labor force withdrawal	Subjective	Pension income and labor force withdrawal	Pension income and subjective	Subjective and labor force withdrawal
Sample n	815	1635	242	123	59	75	154	72
Total population (thousands)	3135	6109	993	383	244	256	632	255
Percent black	8	8	4	14	3	11	6	9
Percent 57-64	91	36	83	85	74	68	60	78
Percent with health limitations, 1978	29	66	42	51	40	69	44	55
Percent with no impairments, 1976	61	28	48	56	47	37	47	43
Percent with substantial or severe impairment, 1976	4	31	8	10	10	15	7	20
Mean hours worked, 1978: men with work experience	2283	706	2159	1910	1933	1283	1779	1587
Percent working less than 1000 hours, 1978	1	96	5	21	4	59	8	66
Percent working more than 2000 hours, 1978	84	1	78	53	53	30	34	18
Mean family income, 1978 (dollars)	23700	11600	22600	16400	18100	15100	24300	13300
Percent with family income less than $10,000, 1978	10	55	16	34	31	34	5	53
Satisfaction with life, 1978								
Percent very happy	52	38	45	35	49	43	50	35
Percent unhappy	2	13	4	6	3	7	4	11

criteria manifest a somewhat lower degree of satisfaction with life than the other groups. Thirteen percent of them profess to be "somewhat" or "very" unhappy as compared with from 3 to 11 percent of the other groups.

The impressive differences between the all-criteria retirees and those who are retired by less stringent standards should not obscure the differences within the latter group. As might be expected, those groups who meet the labor force withdrawal test--either alone or in combination with one other criterion--tend to suffer poorer health than the other categories. Almost by definition they tend to work fewer hours[14] and, as a consequence have lower family incomes. They also register lower degrees of satisfaction with life than the other groups. In all these respects they are closer than the other three categories to the all-criteria retirees. It is at first surprising that the labor force withdrawal groups are, generally speaking, younger than the others, being closer in this respect to the nonretired men than to those who are retired by all three criteria. However, this age difference is doubtless explained by the large proportion of the group whose labor force withdrawal is accounted for by disability (which can occur at any age) and whose pensions (when any are received) are in reality disability benefits.

Men who are retired by the pension criterion alone or in combination with subjective retirement are in the most enviable position among the retirees. They enjoy an average family income twice as high as the all-criteria retirees, and substantially higher than the other groups. Their health is also significantly better, although perceptibly worse than that of nonretired men. They are more likely to say they are very happy with life and less likely to profess any degree of unhappiness than men in all but one other category. Interestingly, the only important differences between men who are retired by the pension income criterion alone and those who also acknowledge retirement (subjective criterion) is that the latter group is older than the former and is less likely to be in the labor force on a full-time, full-year basis (over 2,000 hours).

From several points of view the most curious group of retirees are those who meet only the subjective criterion--the smallest of any of the categories. They are a relatively young group and enjoy relatively good health. They are quite likely to be working: only 4 percent worked fewer than 1,000 hours in the 12 months preceding the 1978 survey, and over half worked in excess of 2,000 hours. As a consequence, even without pension income their total family income was substantially higher than that of men who were retired by all three criteria: $18,100 versus $11,600. They included the largest proportion of any of the categories who professed to be very happy with their lives, and the smallest proportion who reported any degree of unhappiness. It seems likely that this group includes a disproportionately large number of individuals who as a result of a job (and perhaps career) change after a long period of service in a job, were able to report at some time between 1966 and 1978 that they had "already stopped working at their regular job."

III. SUMMARY

How many men between the ages of 57 and 71 were retired in 1978? The answer turns out to depend very substantially on what "test" of retirement one uses and upon whether one views retirement as a permanent state or considers the concept as relating to current status, allowing individuals to move into and out of the category. That the measures vary according to the definition should not be surprising, but our data permit for the first time a quantification of the differences in the count of retirees as well as in their characteristics, depending upon the definition that is used.

The NLS data base has permitted the use of three quite distinct criteria of retirement, either alone or in combination: (1) a response of "already stopped" to the query "at what age do you expect to stop working at your (a) regular job?"; (2) reported receipt of pension (including disability) income; and (3) partial or complete withdrawal from the labor force.

To give some idea of orders of magnitude, if one defines as retired a person who at any time during the preceding 12 years met any of these criteria, the count was about 8.9 million (73.8 percent of all men 57 to 71 in 1978). If, on the other hand, one requires that the individual have satisfied one of the criteria in the year in question (i.e., 1978) the number is 7.5 million (62.6 percent). If all criteria of retirement must be met, the corresponding figures are 6.1 million or 5.4 million, depending upon whether retirement is viewed as an event or a status. Thus, the number of men age 57 to 71 who were retired in 1978 ranges from 5.4 to 8.9 million, depending on one's meaning--a spread of 63 percent on the smaller base.

Among the three criteria used as single alternatives, the differences are not nearly so great. For instance, on the cumulative basis the range was between 7.0 million and 8.0 million retirees using the labor force withdrawal criterion and the pension income criterion respectively. On the current status basis the spread was even smaller--from 6.2 million (subjective criterion) to 6.8 million (pension income criterion). Thus, the overall spread of estimates was 29 percentage points. As these data suggest, there is substantial overlap among the three criteria: about 70 percent of the men who are retired by any criterion are retired by all three. Nonetheless, pronounced differences appear between those retired by all three criteria and those retired by only one or two. The former tend to be older, in poorer health, less likely to be working, and less well off both economically and psychologically.

Age at retirement varies somewhat depending upon the criterion used. For instance, among retirees between the ages of 65 and 71 in 1978, the proportion who had retired prior to age 65 ranged between 62 percent (subjective retirees) and 69 percent (each of the other two categories). Among the subjective retirees in this age group one-fourth (27 percent) had retired very early (prior to 62), an equal proportion (27 percent) at age 65, and 11 percent at higher ages.

On the basis of these findings, is it possible to suggest an optimal definition of retirement? The answer, it seems to us, is No: the criteria of retirement necessarily depend upon the purpose of the analysis. For example, on the issue of retirement-as-an-event versus retirement-as-a-status, if one opts for the latter it becomes meaningless to ask about post-retirement labor market activity. On the other hand, this concept of retirement does permit the "tracking" of individuals and determination of the extent of movement into and out of retirement. As to the criterion of retirement, each has advantages and disadvantages. Using the pension income criterion results in excluding middle-aged individuals who are forced out of the labor market by poor health without qualifying for retirement or disability benefits, thus presenting a more sanguine view of the circumstances of retired individuals than reality warrants. Use of the labor force withdrawal criterion understates the extent of post-retirement labor market activity. Using a subjective criterion perhaps relies too heavily upon self-perception and gives insufficient weight to objective conditions.

In the remainder of this monograph we will view retirement as an event rather than a current status. Moreover the criterion of retirement will be the subjective one. In other words, the distinction between the retired and the nonretired will hinge on whether the respondent ever reported having "stopped working at a regular job." Our choice of this alternative rests on several considerations. First, of all the single criteria, the subjective measure has the greatest overlap with the others. Of men classified as retired by the subjective criterion, only 3 percent are not also retired by one or both of the other criteria. Second, we believe that the self-perceived status is the most meaningful criterion of retirement in a study whose purposes include a determination of the adequacy of post-retirement income and the extent of post-retirement labor market activity. To use receipt of pension income and/or withdrawal from the labor market as a criterion would be to define the criterion variable in terms of the outcome measure. Finally, use of the subjective criterion allows comparability with our earlier work based on retirement that occurred through 1976 (Parnes and Nestel, 1981).

Footnotes

[1] For a more complete description of the National Longitudinal Surveys, see Center for Human Resource Research (1982).

[2] There were 82 representatives of other races, who have been omitted from all of the data in this study.

[3] U.S. Department of Labor, Manpower Administration, Manpower Research Monograph No. 15. Washington, D.C.: U.S. Government Printing Office, Vol. 1 (1970); Vol. 2 (1970); Vol. 3 (1972); Vol. 4 (1974).

[4] In a few of the telephone surveys, individuals were not asked this question if they had indicated that they were "retired" in response to the lead question designed to establish labor force and employment status ("What were you doing most of last week--working, looking for work, or something else?").

[5] In addition to this group and those who described themselves as "retired" (see footnote 4), there were two other small groups who have been included among the subjectively retired: those who at some other point in the interview attributed some event (e.g., leaving a job) or condition (e.g., absence from the labor force) to retirement (n=30) and those who, in response to a retrospective question in the 1978 survey indicated that they had retired at some point in the past (n=85).

[6] Those receiving only disability income are distinguishable from pension recipients in only some of the surveys.

[7] As an example, we have made use of date of separation from last job reported in the survey in which the retired status is first observed. Also, use has been made of the retirement date reported retrospectively in the 1978 survey unless this is inconsistent with the longitudinal records. The complete set of decision rules are available on request from the authors.

[8] See Parnes et al. (1981), p. 4.

[9] The 1968 survey year is omitted, since the brief mailed questionnaire used in that year does not permit classification by all of the criteria.

[10] It is interesting that in her study based on the Social Security Administration's Retirement History Study, which involves a different measure of subjective retirement, Murray (1979, p. 3) found a roughly comparable proportion--about 70 percent.

[11] In interpreting this proportion it should be kept in mind that the 1966 sample as described here excludes individuals who had disappeared from the sample by 1978 for reasons other than death. The number of deceased as a proportion of the total 1966 sample with which the surveys began was about one-fifth rather than one-fourth. Even this proportion is not an accurate measure of mortality, however, since it excludes men who were dropped from the sample for other reasons (e.g., refusal) and _subsequently_ died.

[12] This, incidentally, is consistent with the finding of Mott and Haurin (1981)

that about two-fifths of black and white NLS respondents who had died between 1966 and 1976 had reported no health problems in the survey prior to death, and that the extent of their labor market activity in the period preceding death was indistinguishable from that of a control group of respondents who were alive in 1976.

[13] Because of small sample size, race and age breakdowns are not particularly meaningful. Although Table 1.7 presents only the totals for each category of retirees, we have examined tabulations with race-age breakdowns and find no basis for concluding that the patterns differ substantially from those manifested by the aggregates.

[14] It should be recalled that men in this category are not necessarily withdrawn (wholly or partly) from the labor force in 1978; it is necessary only for them to have met this criterion at some time between 1966 and 1978.

Chapter 2

The Retirement Experience: Economic Factors

How do men fare economically in retirement? To what extent do they continue to work or manifest an interest in doing so? When they are employed, how do the characteristics of their jobs compare with those they held prior to retirement? Whether they work or not, what are the sources of their income and the relative contribution of each? How does Social Security and/or pension income compare with pre-retirement earnings? To what extent does the real income of retirees deteriorate as time passes? How do all these factors vary according to the reason for retirement and to other characteristics of the retirees and how do retirees perceive the adequacy of their incomes? We now turn to these questions.

The anlayses in this chapter extend and deepen our previous work on the retirement experience of the NLS retirees through 1976 (Parnes and Nestel, 1981). We have preserved from the earlier study use of the variable that we there referred to as the "route to retirement," i.e., the reason for retirement based upon our inference from the longitudinal record of each respondent rather than upon his retrospective response to a direct question. The *a priori* reasons for preferring this approach and the empirical evidence that tends to confirm them are detailed in the earlier work (pp. 157-162) and will not be repeated here, except to observe that it avoids the problem of *post hoc* rationalization that inheres in retrospective responses. The basic categories of reasons for retirement are three: (1) persons who were involuntarily retired under a mandatory retirement plan (mandatory retirement); those whose retirement appears from the total record to have been dictated by poor health (health retirement); and the remainder, i.e., men who appear to have freely chosen retirement (voluntary retirement). The latter group is subdivided into those who retired prior to age 65 (early retirement) and those who retired at that age or later (normal retirement).[1]

It is important to understand that we have included in the mandatory group only a subset of men who were covered by mandatory plans: *viz.*, those who retired at the mandatory age *and* had reported in the survey preceding retirement that they would have preferred to work longer.[2] In the absence of evidence that retirement was induced by poor health, we regard as voluntary retirees men under a mandatory plan who retire before they have to, or at the mandatory age if they have reported no desire to work longer. Retirees who do not qualify for inclusion in the mandatory retirement group are classified as having retired for health reasons if evidence of work-limiting health problems is found in the year preceding retirement.[3] All others are regarded as voluntary retirees.

I. REASONS FOR RETIREMENT

We confine the analysis to men who reported their retirement (by the subjective criterion) between calendar year 1967 and the 1978 survey and who were interviewed in 1980. Those who retired earlier and later are excluded in order to be able to have an unambiguous record of at least 12 months on either side of the retirement event for purposes of measuring pre-and post-retirement annual income and work experience. The sample thus contains 1,591 individuals, who are representative of about 5.7 million white and almost one-half million black retirees in 1980 between the ages of 59 and 73 who had been retired at least two years but not more than thirteen. It is important to keep in mind that this group cannot be construed to be representative of *all* retirees as of 1980. The fact that the oldest member of the sample is 73 means that individuals who had been retired for long periods of time are not represented; nor are men whose retirement occurred subsequent to 1978.

Table 2.1 shows the distribution of the retirees by reason for retirement and by year of retirement. As would be expected due to the aging of the sample, recent retirements--those between 1975 and 1978--account for a substantial portion of the total. One in twelve occurred between 1967 and 1969 and nearly one half between 1970 and 1974. Overall, fewer than 5 percent of the retirees were unwillingly removed from jobs by the operation of mandatory retirement plans. Poor health was a far more pervasive factor in inducing retirement, accounting for 36 percent of the total. This leaves a majority of the retirees--three-fifths of the total--whose retirement may be viewed as truly voluntary. A pronounced racial difference appears, however, in reasons for retirement. A much larger proportion of blacks than of whites retired for health reasons (47 percent versus 34 percent), and a correspondingly smaller proportion of black retirements were truly voluntary.

These proportions, incidentally, are somewhat different from those we reported based upon men in the NLS sample who were retired as of 1976. While the proportion of mandatory retirements was almost identical, relatively more of the retirements in the earlier study were related to health (44 percent) and a smaller proportion (53 percent) were voluntary (Parnes and Nestel, 1981, p. 158). The reason for the difference stems from the aging of the sample over time; that is, relatively more of the earlier group of retirees had retired prior to 65, when health problems are a more significant cause of retirement. This aging effect is shown clearly by Table 2.2, which distributes the 1978 retirees by age at retirement and reason for retirement. Whereas 28 percent of those who retired between 62 and 64 did so because of poor health, the corresponding proportion of those who retired at 65 or older was only 18 percent. Also of interest in Table 2.2 is the fact

Table 2.1 Distribution of Retirees, by Race, Calendar Year of and Reason for Retirement, 1978

Reason for retirement	Retired 1967-1978			Retired 1967-1969			Retired 1970-1974			Retired 1975-1978		
	Total	White	Black	Total	White	Black	Total	White	Black	Total	White	Black
Sample n	1591	1162	429	130	96	34	748	543	205	713	523	190
Population (thousands)	6076	5629	448	497	465	32	2847	2641	206	2734	2524	210
Total percent	100	100	100	100	100	100	100	100	100	100	100	100
Mandatory	4	4	5	0	0	0	3	3	5	6	6	5
Health	36	34	47	61	60	84	37	37	40	30	28	49
Voluntary	61	62	47	39	40	16	60	61	55	65	66	46
Early	45	45	37	39	40	16	46	46	44	44	45	34
Normal	16	16	11	0	0	0	14	14	11	20	21	12
% distribution by time period	100	100	100	8	8	7	47	47	46	45	45	47

that even when attention is focused on the minority of men who retired at age 65 or older, only one in seven of the whites and one in five of the blacks were forced out of jobs by mandatory retirement rules.

The relationships shown by Table 2.2 are also evident when one compares the reasons for retirement in the several time periods shown in Table 2.1. Health retirements decrease and voluntary retirements increase in relative importance as one moves from the 1967-1969 to the 1975-1978 period. Mandatory retirements also increase, because in the period 1967-1969 none of the men had yet achieved age 65, then the lowest age of mandatory retirement for 95 percent of men covered by such plans (Parnes, 1970, pp. 175-76). For the same reason, the proportion of "normal" voluntary retirements increased from zero between 1967 and 1969 to about one in five between 1975 and 1978.

Differentiating retirement for health reasons and from "voluntary" retirement does present a conceptual problem. Because very few disabilities or health problems entirely preclude all types of labor market activity, retirement for health reasons is almost always in some sense "voluntary." This ambiguity in "reason for retirement," it should be noted, is independent of the means by which the "reason" is ascertained. Even if we were able to rely on the evidence of complete medical examinations, we would still have to decide where to draw the line between those who "had" to retire because of bad health and those who "chose to" (or should be allowed to) because of the increasing discomfort of work. If one chooses to rely on the retiree's perception of why he retired, the difficulties are even greater, because different answers can legitimately be given by persons whose health conditions are identical. Consider for instance three hypothetical, equally arthritic paperhangers, one of whom has only Social Security to look forward to in retirement, a second of whom has, in addition, private pension coverage, and

Table 2.2 Distribution of Retirees, by Race, Age at and Reason for Retirement

Reason for retirement	Age at retirement and Race											
	Total			Under 62			62-64			65 or older		
	Total	White	Black	Total	White	Black	Total	White	Black	Total	White	Black
Sample n	1591	1162	429	688	506	182	530	364	166	371	291	80
Population (thousands)	6076	5629	448	2616	2427	189	1925	1756	169	1530	1442	88
Total percent	100	100	100	100	100	100	100	100	100	100	100	100
Mandatory	4	4	5	a	a	1	1	1	1	14	13	21
Health	36	34	47	52	51	63	28	26	43	18	17	24
Voluntary	61	61	48	48	49	36	72	73	56	68	70	55
Early	45	45	37	47	48	36	71	72	55	7	8	3
Normal	16	16	11	1	1	a	1	1	1	61	62	52

[a] Less than 0.5 percent.

the third of whom is identical to the second except that he dislikes his job very much. If all three retire and are asked the reason, "bad health," "good pension," and "disliked job" are, respectively, equally honest and legitimate responses.

Our method of differentiating the "health retirements" from the "voluntary retirements" is admittedly arbitrary. It has the advantage of relying on responses to questions asked prior to retirement and in contexts other than an explanation of the retirement decision. Nevertheless, it cannot be claimed to provide a thoroughly clean line of demarcation between the two groups of retirees, and for this reason one needs to be wary about using the percentages uncritically to indicate the proportion of retirees whose health "forced" them out of the labor market. The best that can be said is that even though there may be some overlap in objective health condition between those we have classified as the "health retirees" and the voluntary category, on average they are very distinct groups. Our analysis of post-retirement experience will make this clear; in the meantime, other evidence tends to create confidence in our classification system, namely, the relation between the retirement categories and the detailed measures of physical and mental impairments that were included in the 1976 interview schedule.

Table 2.3 shows the distribution of men who had retired prior to the 1976 survey, cross classified by our reason for retirement and an index of impairment based on the 1976 data. Although two-fifths of the voluntary retirees reported no impairments, only 5 percent of those in the health retirement group reported none; and in contrast to the 60 percent of the health retirees with substantial or severe impairment, only 16 percent of the early voluntary retirees and 10 percent of those who retired at 65 or later were so disadvantaged.

Table 2.3 Men Who Retired Prior to the 1976 Survey,[a] by Reason for Retirement and 1976 Impairment Index[b]

(Percent distributions)

Extent of impairment[b]	Total	Mandatory	Health	Voluntary	
				Early	Normal
Sample n	1576	48	697	654	173
Total percent	100	100	100	100	100
None	25	42	5	38	39
Minor	18	23	9	22	28
Moderate	25	19	26	24	23
Substantial	18	12	30	10	8
Severe	15	4	30	6	2

[a] Includes men who had retired prior to calendar year 1967.
[b] For construction of impairment index, see Chirikos and Nestel (1981) pp. 114-116.

II. POST-RETIREMENT LABOR MARKET ACTIVITY

Labor Force Participation and Unemployment

We look now at the propensity of retirees to engage in labor market activity after retiring from their "regular" job. How many were working or looking for work in the survey week of 1980? Table 2.4 shows the labor force participation rate and the unemployment rate of the retirees classified by race, pre-retirement occupation, reason for retirement, and year of retirement.

Overall, 16 percent of the retirees were either working or looking for work at the time of the 1980 survey. Of these, the percentage unemployed was very low--only 1.3 percent. Substantial variation appears in labor force participation according to race, pre-retirement occupation, and reason for retirement. White men were more likely than black men to be in the labor force (16 versus 11 percent). Men who retired from professional or managerial positions registered a participation rate 8 percentage points higher than the rest of the sample and registered no unemployment. To the extent that the

Table 2.4 Labor Force Participation and Unemployment Rate in 1980 Survey Week, by Year of Retirement and by Race, Pre-Retirement Occupation, and Reason for Retirement

Year of retirement, labor force participation (LFPR), and unemployment rate	All retirees	Race		Occupation		Reason for retirement				
		Whites	Blacks	Professional or managerial	Other	Mandatory	Health	Voluntary Total	Voluntary Early	Voluntary Normal
Total, 1967-1978										
Sample n	1591	1162	429	329	1255	63	609	917	689	228
LFPR	16	16	11	22	14	24	10	18	18	17
Unemployment rate	1.3	1.0	4.2	0	2.0	a	0	0.7	1.0	0
1967-1969										
Sample n	130	96	34	27	100	0	86	44	44	0
LFPR	9	9	3	15	7	-	3	18	18	-
Unemployment rate	a	a	a	a	a	-	a	a	a	-
1970-1974										
Sample n	748	543	205	151	597	23	284	441	339	102
LFPR	14	14	12	18	13	20	13	14	15	11
Unemployment rate	1.3	1.3	0	0	1.9	a	0	0	0	a
1975-1978										
Sample n	713	523	190	151	556	40	239	432	306	126
LFPR	19	19	10	28	15	27	10	21	21	22
Unemployment rate	1.4	0.8	a	0	2.3	a	0	1.4	2.0	0

[a] Percentage not calculated where base is fewer than 20 sample cases.

small number of sample cases allows a reliable measure, it appears that men who were unwillingly retired by mandatory plans were half again as likely as other retirees to be in the labor market--24 percent versus the overall average rate of 16 percent. At the other extreme, only one-tenth of the men who retired because of health problems were in the labor force. The voluntary retirees had an 18 percent participation rate, with virtually no difference between those who had retired early and those who left their jobs at 65 or later.

Recent retirees are much more likely to be in the labor market than those who retired in the late 1960s or early 1970s - - 19 percent versus 9 and 14 percent respectively. To some extent this difference reflects the fact that health retirements constituted a larger proportion of the total in the earlier years--one-half for the 1967-1969 period as compared with one-third for the two later periods; it also reflects the older age in 1980 of the earlier retirees. Thus, whether there is a true trend toward increased post-retirement labor force participation cannot be ascertained from Table 2.4, but Table 2.5 addresses this issue by tabulating the labor force participation rate for each category of retirees in the week of the first survey following retirement. The data show a remarkable consistency over the several time periods for all categories of retirees combined. While the pattern is irregular for black men and for the several reasons-for-retirement categories, no evidence appears in any case of an upward trend in the labor force participation rate. The data do show higher rates of unemployment than are evident in the 1980 data.

Variation in Labor Force Participation by Selected Characteristics

Although previous studies have examined the sources of variation in the

Table 2.5 Labor Force Participation Rate and Unemployment Rate in Survey Week Following Retirement, by Year of Retirement and by Race and Peason for Retirement

Year of retirement and labor force participation rate (LFPR)	All retirees	Race		Reason for retirement				
		White	Black	Mandatory	Health	Voluntary		
						Total	Early	Normal
Total, 1967-1978								
Sample n	1591	1162	429	63	609	917	689	228
LFPR	22	22	17	30	15	25	27	20
Unemployment Rate	5.0	4.3	17.3	a	3.1	5.2	5.7	3.1
1967-1969								
Sample n	130	96	34	0	86	44	44	0
LFPR	23	24	6	-	11	41	41	-
Unemployment Rate	8.7	a	a	-	a	a	a	-
1970-1974								
Sample n	748	543	205	23	284	441	339	102
LFPR	22	22	22	21	18	25	27	17
Unemployment Rate	6.0	5.1	18.7	a	2.7	6.3	7.2	1.4
1975-1978								
Sample n	713	523	190	40	239	432	306	126
LFPR	21	21	13	34	12	23	24	23
Unemployment Rate	3.2	2.6	16.0	a	0.0	3.6	3.5	4.0

[a] Percentage not calculated where base is fewer than 20 sample cases.

labor supply of older workers (e.g. Bowen and Finegan, 1969), to the best of our knowledge none has confined the analysis to men who regarded themselves as retired. It is interesting to inquire what factors bear a net relationship with the likelihood of labor force participation after retirement. Table 2.6 presents the results of a multiple classification analysis directed at this question.

Age, extent of physical or mental impairment, character of pre-retirement employment, the individual's attitude toward retirement, and level of family income exclusive of the retiree's earnings all have a significant influence on the likelihood of post-retirement labor market activity. Other things equal, the retirees who had not yet reached age 65 were more than twice as likely as those 70 to 73 years of age to be in the labor force (23 versus 9 percent), while the participation rate of men 65 to 69 fell between those of the other two age groups. Extent of physical or mental impairment in 1976 also bears an almost monotonic relationship to the likelihood of labor force participation. Men with substantial or severe disabilities were only half as likely as those with minor or no impairments to be in the labor market. It is interesting that the inclusion of this variable does not substantially weaken the net relationship between reason for retirement and labor force participation. The adjusted labor force participation rate for the voluntary retirees is 18 percent as compared with 24 percent for the mandatory retirees and 11 percent for those who retired for health reasons. In a comparable analysis (not shown) without the impairment variable the difference in participation rates between the mandatory retirees and those who retired for health reasons was only slightly larger--26 percent for the former and 9 percent for the latter. These results suggest either that the impairment index does not measure the full extent of health problems, or that men who

Table 2.6 Labor Force Participation Rate of Retirees in 1980, by Selected Characteristics

(MCA results)

Characteristic	n	Adjusted[a] labor force participation rate (F-ratio)
Total sample	1591	16
Race		(1.562)
White	1162	16
Black	429	12
Reason for retirement		(5.856)**
Mandatory	63	24+
Health	609	11**
Voluntary: early	689	17
Voluntary: normal	228	19
Extent of impairment[b]		(6.855)**
None	490	19*
Minor	289	22**
Moderate	387	14
Substantial	231	9**
Severe	177	7**
Family income excluding respondent's earnings		(10.779)**
$5,000 or less	267	27**
$5,001-10,000	372	17
$10,001- $15,000	255	9**
$15,001 and over	304	11**
Age (1980)		(17.709)**
59-64	400	23**
65-69	671	17
70-73	520	9**
Type of worker, pre-retirement job		(3.618)
Government	298	19
Private wage or salary	1029	14*
Self-employed	234	20+
Net assets, 1976		(2.023)+
$15,000 or less	458	13**
$15,001-35,000	255	15
$35,001-70,000	259	17
$70,001 and over	220	21
Pre-retirement occupation		(2.664)*
Professional/managerial	331	21**
Other white collar	153	13
Craftsmen	351	13
All other	753	15

Table 2.6 (continued)

Characteristic	n	Adjusted[a] labor force participation rate (F-ratio)
Marital status		(4.580)**
Married: wife worked	299	22**
Married: wife did not work	945	14**
Nonmarried	303	16
Attitude toward retirement, 1978		(9.606)**
Favorable	480	10**
Ambivalent	615	16
Unfavorable	362	22**

[a] The adjusted labor force participation rate is derived from multiple classification analysis (MCA), which is analogous to multiple regression analysis in which all of the independent variables are expressed in categorical form. The constant term in the MCA equation is the mean of the dependent variable, and the coefficient of each explanatory variable represents a deviation from this mean. Thus, the "adjusted" rate for each category of a variable represents what the dependent variable (participation rate) would have been had the members of the category been "average" in terms of all the other variables included in the analysis. The F-ratio (shown in parentheses) tests the overall significance of the explanatory variable. The t-statistic tests the significance of a particular code category of the explanatory variable against the grand mean.

[b] For construction of impairment index, see Chirikos and Nestel (1981), pp. 114-116.

**Significant at .01 level.

* Significant at .05 level.

+ Significant at .10 level.

were forced into retirement by poor health are discouraged from seeking other employment even if it might be compatible with their health condition.

Men who had been in professional or managerial jobs before retiring were significantly more likely than others to be in the labor force in 1980, with a participation rate of 21 percent as opposed to 13 to 15 percent for other occupational categories. This pattern may reflect the higher wage rate available to the professional and managerial groups or the more attractive positions for which they qualify. Government workers and the self-employed also manifested a greater propensity to work, with adjusted participation rates five or six percentage points higher than those of men who had been wage or salary workers in the private sector. For government workers this may reflect the fact that they are less likely than men in the private sector to be covered by Social Security, with its earning test. For the self-employed it may reflect the absence of work constraints frequently found in private pension plans, plus the fact that self-employed persons are better able than wage and salary workers to arrange for part-time work after retirement (cf. Quinn, 1980).

Responses given in 1978 to a series of questions about retirement[4] proved to be a good predictor of post-retirement labor market activity. Men who had expressed favorable views about retirement had an adjusted participation rate of only 10 percent, as compared with 16 percent for men with ambivalent attitudes and 22 percent for those with unfavorable views. Total family income excluding respondent's 1980 work earnings is also a strong predictor of post-retirement labor market activity. The adjusted participation rate of those with incomes under $5,000 is more than 15 percentage points higher than that of men with non-work incomes over $10,000. The relationship, however, is not monotonic; the adjusted participation rate for the highest income category is actually higher than that of the immediately preceding one. Bowen and Finegan (1969, p. 313) obtain an analogous result in their analysis of the labor force particpation of males 65 and over on the basis of 1960 Census data, except that their income variable excludes earned income of other family members. They explain their finding in part on the basis of the speculation that the top income bracket of men includes a "disproportionate number of individuals with exceptional ability and ambition and a strong taste for work." This same explanation probably accounts for the low level of significance in the present study between labor force participation and net assets. That is, the assets that the men have accumulated reflect in large measure their life-long commitment to work. In the absence of a direct measure of this variable, the assets variable picks up its influence (which would be expected to be positively related to labor force participation) as well as the influence of wealth (which would have the opposite influence).

Marital status and labor market activity of the wife are significant determinants of the husband's labor force participation. Husbands' and wives' leisure time appear to be complements: retirees whose wives work are more likely to participate than retirees whose wives do not work (22 percent versus 14 percent), a finding that has also been arrived at by quite different methods on the basis of the Social Security Administration's Retirement History Study (Clark, Johnson, and McDermed, 1980). The four percentage point differential between the labor force participation rates of blacks and whites is not statistically significant.

Extent of Work Activity During Year

The pattern of employment of the retirees over the 12-month period prior to the 1980 survey is similar to that manifested by the survey week labor force status, although levels of activity are higher (Table 2.7). For the total group of retirees, 23 percent had some employment over the year, as compared with a 16 percent labor force participation rate in the survey week. Of those who did work, almost half were full-year workers--11 percent of all the retirees. Weeks of employment were greater for whites than blacks, for men who had been in professional or managerial jobs than for others, and for the mandatory retirees than for other categories. One-third of the mandatory retirees had some employment during the year, and 15 percent were full-year workers. In contrast, only 15 percent of the men who retired for health reasons worked at all, and only 7 percent throughout the year.

In the weeks in which they were employed, most of the retirees (60 percent) usually worked only part time and as many as one-fifth worked fewer than 15 hours per week. There was less variation in hours of employment per week than in weeks per year, although black men were considerably less likely than whites to work full time, and men who had voluntarily retired at age 65 or later were also less likely to be full-time workers. Considering both weeks of employment and hours per week, about one in five of the retirees worked full-time (i.e., 2000 or more hours per year), while about one in four worked only 500 hours. When the number of full time (2000 hours) workers is expressed as a percentage of all retirees (whether employed or not) the overall proportion is only 4 percent--as low as 2 percent among blacks and as high as 7 percent among voluntary early retirees.

Retirees who had worked at any time during the 12-month period prior to the 1980 interview were asked the following questions: "In view of the fact that you have retired from a regular job, what would you say is the main reason you have been working during the past 12 months?" Table 2.8 presents the responses, cross-classified by race and age. An economic and a

Table 2.7 Employment Experience of Retirees, by Race, Pre-Retirement Occupation, and Reason for Retirement, 1980

		Race		Occupation		Reason for retirement				
								Voluntary		
Characteristic	All retirees	White	Black	Prof./mgr.	Other	Mandatory	Health	Total	Early	Normal
Sample n	1591	1162	429	329	1255	63	609	917	689	228
Employment experience, past 12 months										
No employment (%)	77	76	83	66	81	67	85	73	74	72
Worked 26-49 weeks (%)	6	7	6	9	6	9	4	8	8	6
Worked 50-52 weeks (%)	11	11	5	17	9	15	7	13	12	15
No unemployment (%)	97	98	97	97	98	94	99	97	97	96
Retirees with some employment experience, past 12 months										
n	345	273	72	110	235	19	86	238	182	56
Usual weekly hours										
Less than 15 (%)	18	18	19	17	18	a	18	17	14	26
35 or more (%)	40	41	27	38	41	a	50	38	42	26
Total hours worked										
Less than 500 (%)	27	27	34	27	27	a	31	26	26	24
2000 or more (%)	18	19	8	16	19	a	20	18	22	8

[a] Percentage not calculated where base is fewer than 20 sample cases

Table 2.8 Reason for Working, by Race and Age: Retirees Who Worked in 12 Months Preceding 1980 Survey

	Total			Whites			Blacks		
	Total	Under 65	65 or older	Total	Under 65	65 or older	Total	Under 65	65 or older
Sample n	297	84	213	238	68	170	59	16	43
Total percent	100	100	100	100	100	100	100	100	100
Health improved	3	4	2	3	4	2	2	a	0
Inflation	30	37	27	29	36	26	49	a	45
Job opportunity	13	18	10	14	19	10	14	a	15
Bored in retirement	26	24	28	27	24	29	11	a	12
Other	28	17	33	28	17	33	24	a	28

[a] Percentage not calculated where base is smaller than 20 sample cases.

psychological stimulus to employment were the two most frequently mentioned: inflation (30 percent) and boredom with retirement (26 percent). A small minority of the working retirees (3 percent) attributed employment to improved health, and somewhat over one-tenth mentioned the appearance of a job opportunity. A miscellany of other factors accounted for the work activity of the remaining men. Differences appear in this pattern both by age and by race: men 65 or older were less likely than younger men to attribute their labor market activity to the pressure of increased living costs or to the appearance of a job opportunity. Black men were considerably less likely than whites to have worked out of boredom and considerably more likely to have been compelled to work by the rising cost of living.

Labor Market Propensities of Nonworking Retirees

What about the men who were not working or looking for jobs in 1980? To what extent did they plan or wish to enter the work force? We have three measures that shed light on this issue. First, men who were out of the labor force in the survey week were asked the main reason they were not working or seeking work.[5] Second, they were asked whether they intended "to look for work of any kind in the next 12 months." Third, a hypothetical job offer was posed: "If you were offered a job by some employer in this area, do you think you would take it?"[6]

All of these measures point to the same conclusion: that the vast majority of retirees who are out of the labor force have no interest in working (Table 2.9). To begin with, it is important to note that a negligible percentage of the retirees--only 1 percent--explained their absence from the labor market by a perception that no jobs were available; among black men the proportion is 3 percent; among the mandatory retirement group it is 7

Table 2.9 Labor Force Propensities of Retirees Not in Labor Market in Survey Week 1980

Item	All retirees	Race		Occupation		Reason for retirement				
								Voluntary		
		White	Black	Prof./ mgr.	Other	Manda- tory	Health	Total	Early	Normal
n	1357	972	385	256	1097	49	552	756	564	192
Reason not seeking work										
Health	33	32	51	22	36	15	59	17	18	15
"Retired"; don't want to work	60	62	42	70	57	76	37	74	73	77
No work available	1	1	3	1	1	7	1	2	2	2
Other	6	6	4	7	5	3	3	7	7	7
Work-seeking intentions, next 12 months										
Yes, definitely or probably	2	2	2	2	2	4	1	3	3	3
Maybe; don't know	5	5	6	7	5	7	4	6	6	7
No	93	93	92	91	93	89	96	91	91	90
Reaction to hypothetical job offer										
Yes, unconditional	3	3	3	5	2	3	1	4	5	2
Yes, conditional	12	12	13	17	11	20	8	14	15	13
No, health	37	36	56	23	40	22	64	19	20	19
No, other reason	48	48	28	55	46	55	27	62	60	67

percent. Responses to the query about plans to enter the labor market in the near future are overwhelmingly negative--93 percent overall -- and even among the mandatory retirement group the percentage is nearly 90. Finally, and most persuasively, over eight out of ten of the respondents categorically deny an interest in a job--37 percent because of poor health and 48 percent for other reasons. Only 3 percent respond unconditionally in the affirmative, while the remaining 12 percent indicate a conditional interest. There are, to be sure, differences by reason for retirement and by pre-retirement occupation, but a very large majority of each group--ranging between 77 and 91 percent--state without reservation that they would not take a job.

The proportion of men expressing a categorical or conditional interest in a job is higher among those who had been professional or managerial workers than for men who had been in other occupations (22 versus 13 percent). Among the several reason-for-retirement categories, men who retired for health reasons have the lowest proportion expressing an interest in work--9 percent versus 15-23 percent for the other categories. However, the most substantial difference between the health retirees and the voluntary retirees is the reason the majority give for not being interested in working. Over three-fifths of the former mention poor health; an equal proportion of the latter provide other reasons--typically "I'm retired" or "I don't need the money."

Would the responses to the hypothetical job offer have been different had the respondents been given an explicit opportunity to consider part-time work? This option did not explicitly appear in the 1980 interview schedule, but in 1981 all men who responded negatively to the job offer question were asked, "What if it were a part-time job?" Among all men out of the labor force in the survey week of 1981 (irrespective of retirement status) 83 percent responded negatively to the question as it had been asked in 1980, and this proportion was reduced by only 5 percentage points (to 78 percent) when the option of part-time employment was explicitly offered.

Considering all retirees--those in as well as those out of the labor force--what can we say about the proportion who manifest an interest in work? Adding the 23 percent of the retirees who worked at some time during the year preceeding the 1980 survey to the 15 percent of those out of the labor force in the 1980 survey week who expressed at least a conditional interest in employment yields a total of 38 percent of the total sample. Thus, on the basis of these data, adjusted for the additional group who might be interested in part-time work, the proportion of retirees in their 60s and early 70s who appear to be available for work is, at most, about two-fifths. A majority of retirees leave their jobs either because their health makes work impossible or uncomfortable or because they have tired of working and seek leisure. While a minority--under a fourth--continue to work (mainly part time), a very large majority of the remainder are uninterested in working, and for basically the same two reasons that led them to retire in the first place.

The Post-Retirement Jobs of Employed Retirees

Of the minority of the retirees who were employed at the time of the 1978 survey, 28 percent of the whites and 15 percent of the blacks were serving in the same occupation as in their pre-retirement job (Table 2.10). Of the remainder, more had moved down the socioeconomic hierarchy of occupations than had remained at the same level or moved up. Although the small number of sample cases in most of the categories preclude confident distinctions, it appears that black men were less likely to move downward than whites (probably because they had started at lower levels), and that men who had retired voluntarily at age 65 or older were more likely than any other category to be

Table 2.10 Comparison of Current and Pre-Retirement Job, by Race and Reason for Retirement: Retirees Employed in 1980

Characteristic	Whites				Blacks			
			Voluntary				Voluntary	
	Total	Health	Early	Normal	Total	Health	Early	Normal
Sample n	187	43	102	31	44	12	26	3
Occupation								
Total percent	100	100	100	100	100	100	100	100
Same 3-digit	28	28	24	44	15	a	3	a
Different 3-digit								
Higher socioeconomic status	23	24	23	18	19	a	33	a
Same socioeconomic status	9	6	12	9	31	a	34	a
Lower socioeconomic status	41	40	42	30	35	a	30	a
Industry								
Total percent	100	100	100	100	100	100	100	100
Same 3-digit	28	42	18	44	23	a	20	a
Different 3-digit								
Same 1-digit	11	6	14	9	8	a	4	a
Different 1-digit	61	52	68	47	69	a	76	a
Type of worker								
Total percent	100	100	100	100	100	100	100	100
Wage and salary, both jobs	64	77	56	65	77	a	75	a
Wage and salary pre-retirement, self-employed in 1980	10	0	20	9	9	a	11	a
Self-employed pre-retirement, wage and salary 1980	16	23	14	18	8	a	13	a
Self-employed, both jobs	9	0	10	7	6	a	0	a

[a] Percentage not calculated where base is fewer than 20 sample cases.

serving in their pre-retirement occupations. Indeed, almost half of the very small group of wage and salary workers in this group were working for their pre-retirement employer, in contrast with under a fifth of the other categories of retirees (Table 2.11).

Most of the post-retirement jobs were in industries different from those from which the men had retired. Indeed, even using the broadest industrial categories (e.g., construction, manufacturing, trade), about three-fifths of the retirees had moved across industry lines. About two-thirds of the employed retirees--three-fourths of the blacks--were in wage and salary positions both before and after retirement; however 16 percent had moved from self-employment into wage or salary jobs, 10 percent had moved in the opposite direction, and 9 percent were in self-employment both before and after retirement.

Among those who were wage and salary workers at both points in time (Table 2.11), most had reduced their weekly hours by substantial amounts, although one-third were working as many or more hours in their 1980 jobs as they had prior to retirement. Men who had retired voluntarily at age 65 or older were most likely to have reduced their weekly hours. Only 5 percent were working as many hours as prior to their retirement, and over half were working at least 20 fewer hours per week. In terms of job satisfaction, the working retirees seem in general to have improved their lot: 60 percent reported liking their 1980 job very much, while the corresponding proportion measured at the most recent survey prior to retirement was 49 percent. The situation is quite different with respect to financial rewards; adjusted for changes in the purchasing power of the dollar, average hourly earnings were lower for all but one-tenth of the men, and in over two-thirds of the cases the decrease was at least $2.00 per hour. In dollars of constant purchasing

Table 2.11 Comparison of Selected Characteristics of Current and Pre-Retirement Job: Retirees Employed as Wage and Salary Workers Prior to Retirement and in 1980

	Whites				Blacks			
			Voluntary				Voluntary	
Characteristic	Total	Health	Early	Normal	Total	Health	Early	Normal
Sample n	109	24	60	21	34	18	19	2
Percent with same employer	22	14	17	48	17	a	a	a
Usual hours worked								
Total percent	100	100	100	100	100	100	100	100
Same or more hours in 1980	33	47	39	5	41	a	a	a
1-19 fewer hours in 1980	31	32	29	43	22	a	a	a
20-24 fewer hours in 1980	16	4	16	14	16	a	a	a
At least 25 fewer hours in 1980	21	17	16	37	21	a	a	a
Attitude toward job								
Total percent	100	100	100	100	100	100	100	100
Liked both very much	37	33	29	58	31	a	a	a
Liked 1980 job very much; not pre-retirement job	23	18	24	31	13	a	a	a
Liked pre-retirement job very much, not 1980 job	12	10	18	0	26	a	a	a
Liked neither job very much	29	39	30	11	30	a	a	a
Average hourly earnings (1980 dollars)								
Total percent	100	100	100	100	100	100	100	100
1980 job same or higher	10	18	6	15	12	a	a	a
1980 job lower by $1.00 or less	5	0	10	0	5	a	a	a
1980 job lower by $1.01-1.99	15	9	15	22	17	a	a	a
1980 job lower by $2.00 or more	70	73	69	63	65	a	a	a
Median average hourly earnings (1980 dollars)								
Pre-retirement job	9.50	7.13	9.50	10.37	6.12	a	a	a
1980 job	4.45	3.55	4.94	4.50	3.09	a	a	a
Ratio pre-retirement/1980 job	.47	.50	.52	.43	.50			
Median annual wage and salary income (1980 dollars)								
Year prior to retirement	19,507	12,505	19,920	22,978	9,963	a	a	a
12 months prior to 1980 survey	4,515	4,500	5,014	4,505	2,995	a	a	a
Ratio: pre-retirement year to 1980	.23	.36	.25	.20	.30			

[a] Percentage or median not calculated where number of sample cases is smaller than 20.

power, median average hourly earnings in 1980 were only about 50 percent of what they had been in the pre-retirement job. Taking into account also the reduction in annual hours, total wage and salary income in the twelve months preceding the 1980 survey was only 23 percent of what it had been in the year preceding retirement for white men and 30 percent in the case of blacks.

III. POST-RETIREMENT FINANCIAL STATUS

Returning now to the total sample of retirees, we examine in this section a number of aspects of their financial condition, including the sources of family income, the character and amount of pension income, the relation between pension income and pre-retirement earnings, and their perceptions of the adequacy of their income.

Sources of Total Family Income

As would be expected, the most universal source of income among the retirees is Social Security (or Railroad Retirement) old age benefits, which were received by nine out of ten of the men, with very little variation either by race or marital status (Table 2.12). Other pension income went to almost three-fifths of the men, somewhat more commonly to whites than to blacks and to married than to unmarried men of both races. About one in six of the retirees had earnings from wage or salary jobs and 10 percent had self-employment income. Except for the greater prevalence of self-employment income among whites than blacks (11 percent versus 3 percent), only minor variations appear by race or marital status.

Among married men, wife's earnings contributed to income in one-fourth of the white and 18 percent of the black families. Additionally, 11 and 5 percent of white and black wives, respectively, contributed pension income.

Table 2.12 Percentage of Retirees Receiving Selected Forms of Family Income, by Race and Marital Status, 1980

Source of income	Total race			Whites			Blacks		
	Total	Married	Nonmarried	Total	Married	Nonmarried	Total	Married	Nonmarried
Sample n	1591	1288	303	1162	990	172	429	298	131
Retiree's earnings	17.0	17.0	18.0	18.0	18.0	18.0	15.0	14.0	16.0
Retiree's self-employment	10.0	9.8	11.0	10.6	10.3	12.2	3.3	3.4	3.2
Wife's earnings[a]	19.9	24.0	0	20.5	24.4	0	12.4	17.9	0
Social Security[b]	89.9	90.2	88.7	89.7	89.9	88.7	92.9	94.5	89.3
Retiree's pension	58.5	59.7	52.8	59.5	60.4	54.7	47.1	49.9	40.7
Wife's pension	8.6	10.4	0	9.1	10.8	0	3.3	4.7	0
Public assistance	7.7	6.6	13.3	6.3	5.3	11.5	24.8	24.8	24.6
Financial assistance from relatives	0.7	0.7	0.7	0.7	0.7	0.8	0.3	0.4	0
Income of other family members	12.0	12.0	16.0	12.0	11.0	15.0	17.0	15.0	21.0
Other income	63.7	66.9	48.3	67.5	69.9	55.2	16.9	22.4	4.5

[a] Includes self-employment income.

[b] Includes Social Security or Railroad Retirement benefits paid to retiree and/or his wife.

Income of other family members was present in 12 percent of the total sample, but more frequently among blacks than whites and among unmarried than married retirees. One-fourth of the black men, but under one-tenth of the whites, received public assistance. Other income (principally from property) went to two-thirds of the whites but only one-sixth of the blacks, and in each case was considerably less common among men who were unmarried.

The relative importance of each of these sources in contributing to the average family income of the retirees is shown in Table 2.13. Average income for 1980 was $15,300 for the entire group, but ranged between $16,900 for married whites to $6,900 for unmarried blacks. The ratio of black to white family income was .52; the analogous non-married to married ratio was .65--somewhat higher among blacks.

Perhaps the most interesting aspect of the data is the fact that for the retirees as a whole, retirement income from Social Security and other pensions accounted for less than three-fifths of total family income. The proportion was higher among blacks (two-thirds) because of the relatively greater contribution of Social Security benefits, reflecting the weighting of the benefit formula in favor of lower wage workers. Pension benefits, however, were almost exactly one-fourth of total income for all race-marital status groups except unmarried blacks. Among married men, wife's earnings represented almost one-tenth of income, a proportion not much different from that contributed by the earnings of the retirees. Income of other family members accounted for 6 percent of income overall, but was as high as 11 and 25 percent among nonmarried white and black men respectively. Property income amounted to about one-sixth of the total for whites, but was negligible for blacks. Public assistance contributed only 1 percent for the total sample, but as much as 5 percent in the case of unmarried blacks.

Table 2.13 Composition of Average Family Income of Retirees, by Race and Marital Status, 1980

(Percentage distributions)

Source of income	Total			Whites			Blacks		
	Total	Married	Unmarried	Total	Married	Unmarried	Total	Married	Unmarried
Sample n	1591	1288	303	1162	990	172	429	298	131
Average family income	15,308	16,345	10,335	15,888	16,851	10,883	8,302	8,938	6,876
Total percent	100	100	100	100	100	100	100	100	100
Retiree's earnings	7	7	6	7	7	6	4	3	6
Retiree's self-employment	3	2	5	3	2	6	1	1	a
Wife's earnings or self-employment	8	9	-	8	9	-	7	10	-
Social Security or RR retirement	31	31	33	31	31	33	45	47	40
Retiree's pension	26	26	27	26	26	27	24	25	24
Wife's pension	2	2	-	2	2	-	1	2	-
Public assistance	1	1	1	1	1	1	4	3	5
Income of other family members	6	5	12	6	5	11	12	7	25
Other income	16	17	14	17	17	16	2	3	a

Source: Appendix Table 2A.1. Percentages shown in this table are based on the sum of the components shown in the Appendix table.

[a] Less than 0.5 percent.

The figures that underlie the distribution in Table 2.13 reflect both the incidence of each of the sources of income and the average amount per recipient. In other words, those who did not receive a particular form of income are nevertheless included in the data, and thus reduce the average. For some purposes it is more useful to examine the average per recipient of each form of income, which are the data shown in Table 2.14. On this basis there are five income sources for which the average per recipient was at least $5,000: retiree's earnings ($5,817), wife's earnings ($6,187), Social Security ($5,319); retiree's pension ($6,744) and income of other family members ($7,244). For all of these the value for whites was substantially higher than for blacks. Property income averaged $4,000 for white respondents but less than $1,000 for blacks. Public assistance averaged about $900 for white recipients and about $1,300 for black recipients.

Social Security and Pension Income

As has been seen, almost three-fifths of the retirees were receiving pension income other than Social Security or Railroad Retirement benefits in 1980. The sources of these pensions are shown in Table 2.15. The vast majority of pension recipients were receiving them from only one source, although slightly more than one in ten had two or more pensions. As would be expected, private employer pensions were by far the most common, accounting for 44 percent of the total. An additional one-fourth came from the public sector, almost equally divided between the federal government and state and local units. One in ten of the pensions came from unions, and 7 percent from the armed services. Athough proportionately fewer blacks than whites received pensions, there was virtually no difference between the two races in the relative frequency of the various sources.

Table 2.14 Mean Income Per Recipient, by Source of Income, Race, and Marital Status, 1980

Source of income	Total			Whites			Blacks		
	Total	Married	Unmarried	Total	Married	Unmarried	Total	Married	Unmarried
Retiree's earnings $	5,817	6,293	3,591	6,068	6,527	3,752	2,196	2,075	c
Retiree's self-employment $	3,904	3,693	c	3,953	3,721	c	c	c	c
Wife's earnings[a] $	6,187	6,187	0	6,253	6,253	0	4,873	4,873	0
Social Security[b] $	5,319	5,610	3,910	5,430	5,697	4,033	4,034	4,412	3,134
Retiree's pension $	6,744	7,020	5,292	6,900	7,164	5,424	4,320	4,404	4,116
Wife's pension $	3,168	3,168	0	3,156	3,156	0	c	c	0
Public assistance $	952	937	1,000	873	868	c	1,327	1,363	c
Assistance from relatives $	c	c	c	c	c	c	c	c	c
Income of other family members	7,244	7,030	7,972	7,418	7,285	7,924	5,747	4,191	8,194
Other Income	3,939	4,072	3,065	4,002	4,140	3,102	952	1,023	c

[a] Includes self-employment income.

[b] Includes Railroad Retirement as well as Social Security old age benefits.

[c] Mean not calculated where number of sample cases is fewer than 20.

Table 2.15 Source of Pension Income Received by Retirees (Excluding Social Security), by Race, 1980

(Percentage distributions)

Source	Total	Whites	Blacks
Sample n	876	677	199
Total percent	100	100	100
Private employer only	44	44	44
Armed services only	7	7	6
Other federal government only	11	11	13
State government only	7	7	3
Local government only	6	6	6
Union only	11	11	13
Other source (one only)	2	2	1
Private employer and government	1	1	1
Private employer and armed services	2	2	a
Armed services and other sources	4	4	2
Other combination	5	5	10

[a] Less than 0.5 percent

Replacement Rates[7]

A widely-used measure of the adequacy of retirement benefits is their relationship to pre-retirement earnings--the so-called replacement rate. If one takes into account the reduction in taxes that generally accompanies retirement, as well as the reduction in certain types of expense (e.g., those related to work), it is clear that pre-retirement standards of living can be maintained with replacement rates less than 100 percent. A number of attempts have been made to calculate the replacement rates necessary to maintain pre-retirement living standards for workers at different levels of income and in different family circumstances. A recent set of such estimates for 1981 by Alicia Munnell (1982, p. 24) ranges from .86 for married couples with gross pre-retirement income of $6,000 to .52 for those whose incomes were $50,000. For single persons, the corresponding rates are .50 and .80.[8]

For our sample of retirees who had been employed in wage or salary jobs, Table 2.16 shows the distribution of replacement rates by selected characteristics of the retirees, including whether they received pension income other than Social Security or Railroad Retirement. These ratios were calculated by dividing the total retirement benefits received by the respondent in the 12-month period preceding the 1980 survey by his average wage and salary income in the year prior to retirement, expressed in dollars of 1980 purchasing power.[9]

The average replacement rate for the entire sample of men who had retired from wage or salary jobs is 47 percent, but there is very substantial variation around this mean. At one extreme, about one in seven of the men has a replacement rate under 25 percent; at the other, more than one in ten has a rate in excess of 70 percent or higher. Men covered by pension plans other than (or in addition to) Social Security have higher replacement rates than

Table 2.16 Social Security and/or Pension Replacement Rates[a] of Men Who Retired from Wage and Salary Jobs between 1968 and 1978, by Race, Marital Status, and Type of Retirement Income

(Percentage distributions)

Replacement rate	Total			Whites						Blacks					
				Married			Nonmarried			Married			Nonmarried		
	Total	Social Security only[b]	Social Security and/or pension	Total	Social Security only[b]	Social Security and/or pension	Total	Social Security only[b]	Social Security and/or pension	Total	Social Security only[b]	Social Security and/or pension	Total	Social Security only[b]	Social Security and/or pension
Sample n	1050	359	668	634	182	434	111	39	71	210	90	117	95	48	46
Total percent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
25 percent or less	15	21	11	17	21	11	15	21	11	14	20	8	26	35	13
26-49 percent	46	48	47	47	45	46	59	67	55	36	34	38	48	42	57
50-59 percent	16	9	19	16	10	20	12	5	17	15	11	17	10	6	14
60-69 percent	9	7	10	9	8	10	5	3	6	12	10	14	7	10	5
70-79 percent	6	7	6	7	9	6	2	0	3	9	9	9	1	0	3
80 percent or more	7	7	7	7	7	6	8	5	9	14	15	14	8	7	9
Mean	47	44	51	47	45	50	44	37	48	54	52	57	45	40	53

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[a] The replacement rate was calculated by dividing the sum of Social Security (or Railroad Retirement) benefits and other pension income for the 12 months preceding the 1980 survey by the respondent's wage and salary income (expressed in terms of dollars of 1980 purchasing power) in the most recent 12-month period prior to retirement in which the respondent worked at least 1500 hours.

[b] Includes Railroad Retirement

those without such coverage, but the differences are considerably smaller than what might have been supposed, ranging between 5 and 13 percentage points depending on race and marital status. The reason for these relatively small differences is the intercorrelation between pension coverage and other factors affecting the replacement rate--particularly pre-retirement earnings. Low income workers are less likely to be covered by pension plans than high income workers; low income persons, however, have higher Social Security replacement rates because of the subsidy incorporated in the Social Security benefit formula. As the result of these intercorrelations, it is fruitless to explore the factors that affect the replacement rate except by means of a multivariate analysis. Accordingly, the results of a Multiple Classification Analysis (MCA) of replacement rates is shown in Table 2.17.

For this purpose, the sample is stratified into two groups: (1) men receiving only Social Security or Railroad Retirement benefits and (2) men who receive other pensions either along with Social Security (or Railroad Retirement) benefits, or alone. A large majority of the second group receive both Social Security and additional pension income; however, about 13 percent of the retirees (weighted)--most of whom doubtless held their pre-retirement jobs in government--receive no Social Security benefits.[10] In the MCA of the second group, receipt of Social Security retirement benefits is introduced as an additional explanatory variable.

The benefit provisions of the OASDI program lead one to expect the replacement rate to show a strong relationship with pre-retirement earnings and with marital status;[11] both of these expectations are fulfilled. Because there is a maximum earnings level subject to the Social Security payroll tax each year ($32,000 in 1982), the benefit formula yields a maximum benefit that represents a decreasing fraction of income as income rises above the maximum subject to the tax. Moreover, benefits below the maximum also represent a higher proportion of low than of high pre-retirement earnings, because of the subsidy incorporated in the benefit formula. Thus, the replacement rate varies inversely with pre-retirement earnings; among retirees drawing only Social Security benefits it ranges (controlling for other factors) from 70 percent for men whose pre-retirement wage and salary income (expressed in terms of 1980 dollars) was under $10,000 to 25 percent for those whose earnings were between $20,000 and $29,000. When attention is confined to the approximately two-thirds of the men who receive pension income other than Social Security or Railroad Retirement, the ratios are higher--ranging from 87 to 46 percent for the same income categories and to 39 percent for men whose pre-retirement income exceeded $30,000. It should be noted that only at the low end of the income scale is the average replacement rate sufficient to maintain the pre-retirement standard of living. Munnell's estimates, referred to earlier, range from 73 to 86 percent for income levels between $6,000 and $10,000, but between 52 and 59 percent for incomes between $30,000 and $50,000.

Under the Social Security Act the benefit of a wife (not entitled to a higher one on the basis of her own earnings record) amounts to 50 percent of that of her husband, provided that she doesn't claim it till age 65. At earlier ages down to 62 the benefit is actuarially reduced; below age 62 the wife is not eligible for a benefit. These provisions produce a significantly higher replacement rate for married than for nonmarried men, although the difference is far smaller than the 50 percent differential that would prevail if all wives were at least 65 years old and had begun to draw benefits at that age. As would be expected, the differential is larger for men receiving only Social Security benefits than for those receiving other pensions. The spread

Table 2.17 Social Security and/or Pension Replacement Rates[a] of Men Who Retired from Wage and Salary Jobs between 1968 and 1978 (MCA Results), by Selected Characteristics, 1980

	Retirees receiving Social Security or Railroad Retirement benefits only		Retirees receiving pension income other than or in addition to Social Security or Railroad Retirement	
Characteristic	n	Adjusted replacement rate[b] (F-Ratio) (%)	n	Adjusted replacement rate[b] (F-Ratio) (%)
Total sample	359	44	668	51
Race		(2.675)		(0.347)
White	221	45	505	51
Black	138	39	163	48
Reason for retirement		(0.430)		(0.412)
Mandatory	8	c	44	48
Health	157	45	185	52
Voluntary: early	126	43	352	51
Voluntary: normal	68	46	87	48
Pre-retirement annual earnings		(77.088)**		(40.019)**
Less than $10,000	143	70**	57	87**
$10,000-19,999	151	41*	286	55**
$20,000-29,999	47	25**	225	46**
$30,000 or over	18	c	100	39**
Pre-retirement occupation		(1.789)$^+$		(0.622)
Professional or managerial	42	42	151	49
Clerical or sales	32	50	72	52
Craftsmen	73	48	170	51
Operatives	82	39+	163	52
Laborers	48	46	45	54
Service	48	42	62	49
Farm	34	46	5	c
Pre-retirement industry		(3.001)**		(4.333)**
Agriculture	37	37	8	c
Mining	2	c	13	c
Construction	47	40	52	48
Manufacturing	89	41	273	47*
Transportation and utilities	51	54**	82	54
Trade	54	44	35	47
Finance, insurance, real estate	8	c	20	45
Services	57	46	84	50
Public administration	14	c	101	57*
Year of retirement		(5.996)**		(0.486)
1968-1973	135	40**	241	51
1974-1976	151	49**	270	50
1977-1978	73	43	157	52

Table 2.17 (continued)

Characteristic	Retirees receiving Social Security or Railroad Retirement benefits only		Retirees receiving pension income other than or in addition to Social Security or Railroad Retirement	
	n	Adjusted replacement rate[b] (F-Ratio) (%)	n	Adjusted replacement rate[b] (F-Ratio) (%)
Collective bargaining coverage		(1.549)		(0.812)
Not covered	231	44	309	51
Covered	86	47	302	51
Tenure in pre-retirement job		(1.116)		(1.696)
Less than 5 years	110	44	76	48
5-9 years	52	42	65	52
10-19 years	71	42	117	47+
20 or more years	118	47	399	52+
Marital status, 1980		(11.805)**		(4.346)*
Married, wife present	272	46**	551	52*
Other	87	36**	117	45*
Receipt of Social Security/ Railroad Retirement benefits				(10.987)**
No	-	-	84	42**
Yes	-	-	584	52**
Adjusted R^2		.35		.16

[a] See Table 2.16, footnote a.

[b] See Table 2.6, footnote a.

[c] Replacement rate not calculated where base is smaller than 20 sample cases.

**Significant at the .01 level.

* Significant at the .05 level.

+ Significant at the .10 level.

is 10 percentage points in the former case and 7 points in the latter.

Although there are no perceptible differences in replacement rates among the major occupation groups of wage and salary earners, variation does appear by industry among men with pensions other than Social Security. Public administration has the highest replacement rate, reflecting the more liberal benefits of government employees, especially at the federal level. The only other statistically significant difference is the lower-than-average-replacement rates of men whose pre-retirement jobs were in manufacturing. The inter-industry range of replacement rates is from 57 percent in public administration to 47 percent in manufacturing and trade. Eighty-seven percent of those who receive pensions from other sources also receive Social Security, which boosts the average replacement rate by 10 percentage points. The fact that this figure is so much lower than the average replacement rate for those receiving only Social Security benefits suggests that the group receiving other pensions includes numerous "double dippers" whose Social Security benefits are based on considerably less than full career coverage.[12]

No differences in replacement rates appear by reason for retirement or by race. At first blush it seems strange that the replacement rate for early retirees is no smaller than for those who retired at age 65 or later, since Social Security benefits are actuarially reduced for retirements prior to age 65. The reason, however, is that an adequate replacement rate is one of the factors that induce an individual to retire early. For example, 42 percent of the early retirees were receiving pension income other than Social Security, while the corresponding proportion among "normal" voluntary retirees was only 36 percent.

Without controlling for other factors, the replacement rate for blacks is higher than that for whites both among men receiving only Social Security and among those receiving other pensions, reflecting the lower earnings of blacks and the subsidy incorporated in the Social Security benefit formula. In the multivariate framework the adjusted replacement rates are actually lower for blacks than whites, although the differences do not achieve statistical significance.

Trends in Real Family Income After Retirement

The decade of the 1970s was characterized by very substantial inflation, combined with high levels of unemployment. The consumer price level slightly more than doubled between 1971 and 1980, jumping more than 10 percent in each of three years (1974, 1979, 1980); in the first half of the decade the annual unemployment rate dipped slightly below 5 percent in only one year; in the second half it averaged 6.7 percent. In part reflecting these trends, median real family income in the United States was virtually no higher in 1980 than it had been in 1971 ($21,023 versus $20,926) in comparison with a rise of 32 percent over the preceding decade.[13] In this context it is interesting to examine the trend in the total family income of the retirees during the decade.

Tables 2.18 A and B present median family income reported in the year prior to retirement and in each post-retirement survey year for every cohort of retirees who were married as of 1980. Because the annual number of retirements was rather small between 1968 and 1973 they have been grouped into three two-year periods. In Table 2.18A the annual income data for each cohort is based on a constant number of sample cases--those for whom a total family income measure was available for each year. Table 2.18B is based upon a variable number of sample cases, including in each year's income figure all respondents who provided complete information for that year.

Table 2.18A Median Real Annual Family Income (1980 dollars) from Year Prior to Retirement to 1980, Married Retirees, by Year of Retirement, 1968-1978[a]

Year Retired	n	Survey year[b]							1980 ÷ Pre-retirement year
		Pre-retirement year[c]	1971	1973	1975	1976	1978	1980	
1968-1969	19	23,330	13,264	12,210	12,676	12,866	14,815	13,464	.58
1970-1971	33	23,411		12,244	12,814	12,802	12,066	12,614	.54
1972-1973	70	26,339			13,362	15,425	15,321	11,451	.43
1974	77	22,964				15,166	13,116	10,733	.47
1975	80	26,057				d	13,824	13,586	.52
1976	70	25,631					14,992	13,128	.51
1977	92	24,813					d	14,315	.58
1978	34	25,129						14,138	.56
All Retirees	475	-	-	-	-	-	-	-	.52

[a] Tabulation includes only respondents for whom income information was provided in all years subsequent to retirement.

[b] Income figures relate to preceding calendar year in survey years 1971 and 1976 and to the 12- month period preceding the interview in all other survey years.

[c] First full year prior to retirement for which income figure is available.

[d] Income reporting period overlaps calendar year of retirement.

Table 2.18B Median Real Family Income (1980 dollars) from Year Prior to Retirement to 1980, Married Retirees, by Year of Retirement, 1968-1978[a]

Year Retired	n[b]	Survey year[c]							1980 ÷ Pre-retirement year
		Pre-retirement year[d]	1971	1973	1975	1976	1978	1980	
1968-1969	49-71	25,022	13,276	15,304	12,677	14,779	12,463	10,661	.43
1970-1971	74-101	22,788		12,245	12,011	13,480	11,090	9,618	.42
1972-1973	148-240	25,488			14,418	15,102	14,302	11,448	.45
1974	137-197	22,949				13,482	13,236	11,740	.51
1975	102-156	25,794				e	13,865	11,480	.44
1976	89-126	24,509					14,823	14,613	.60
1977	119-145	23,895					e	13,813	.58
1978	45-59	26,683						14,131	.53
All retirees	763-1095	-	-	-	-	-	-	-	.50

[a] Tabulation includes all respondents for whom income information was provided in any year.

[b] Range includes the smallest number reporting in any year and the largest number reporting in any year.

[c] See note b, Table 4.17A.

[d] First full year prior to retirement for which income figure is available.

[e] Income reporting period overlaps calendar year of retirement.

Despite considerable irregularities in the data, several generalizations appear to be warranted: (1) Median total family income for the total group of retirees in 1980 was, in real terms, about one-half of what it had been in the last full pre-retirement year, whenever that may have been. (2) The more recent cohorts of retirees--i.e., those who retired in 1975 and later--had higher levels of pre-retirement income than the earlier groups, and also higher levels of income in 1980, with the result that the ratio of 1980 to pre-retirement incomes were somewhat higher for the more recent group of retirees. These relationships doubtless reflect the difference in such characteristics as health and age at retirement of the different cohorts of retirees. (3) For most of the cohorts, there appears to be a downward trend in real family income in recent years--i.e., since 1976. The factors in this trend are examined in Table 2.19, which shows changes between 1975 and 1980 in the proportion of retirees receiving certain types of income and the average level of each per recipient.

The data indicate that the downward trend in family income is principally attributable to the decreased labor market activity of both the retirees and their wives. The increased levels of Social Security and other pension income do not compensate for the decreases that occur in earnings.

Perceived Adequacy of Income

We conclude this examination of the economic status of the retirees by considering their subjective reaction to their financial status. In the 1980 interview, respondents were asked "Which of the following four statements best describes your ability to get along on your income: I always have money left over; I have enough, with a little extra sometimes; I have just enough, no more; I can't make ends meet." Table 2.20 compares the responses of retirees

Table 2.19 Real Family Income (1980 dollars) by Source, 1975 and 1980: Married Men Who Retired 1968-1973.

Source of income	1975				1980			
	Percent receiving income	Mean (All respondents)		Median (recipients only)	Percent receiving income	Mean (All respondents)		Median recipients only)
		Dollars	Percentage distribution			Dollars	Percentage distribution	
Total family income	100	16,386	100	13,663	100	14,213	100	11,690
Retiree's wage and salary income	18	1,423	9	3,524	12	852	6	3,497
Wife's wage and salary income	27	2,088	13	7,329	19	1,080	8	4,096
Social Security[a]	74	3,444	21	4,572	90	4,743	33	5,112
Pension income[b]	58	4,545	28	5,768	60	4,142	29	4,798
Other income	78	4,887	30	3,410	76	3,396	24	2,000

[a] Includes Railraod Retirement as well as Social Security old age benefits.

[b] Pension income of retiree and his wife combined.

Table 2.20 Perceived Adequacy of Income, by Retirement Status[a], Marital Status, Age and Race, 1980

Response	Retired						Never Retired					
	Married, wife present			Not married			Married, wife present			Not married		
	Total	Under 65	65 or older	Total	Under 65	65 or older	Total	Under 65	65 or older	Total	Under 65	65 or older
	Total											
Sample n	1648	521	1127	421	119	302	758	606	152	133	94	39
Total percent	100	100	100	100	100	100	100	100	100	100	100	100
"Always have money left over"	20	21	19	19	16	20	29	28	36	35	30	45
"A little extra sometimes"	39	40	38	29	28	30	43	44	38	35	38	28
"Just enough to get by"	33	29	35	37	43	35	23	23	23	24	27	20
"Can't make ends meet"	9	10	8	15	14	16	5	6	3	6	6	7
	Whites											
Sample n	1259	398	859	234	70	164	575	465	110	81	52	29
Total percent	100	100	100	100	100	100	100	100	100	100	100	100
"Always have money left over"	21	23	20	21	18	22	31	29	39	39	34	48
"A little extra sometimes"	40	41	40	31	29	32	43	44	37	34	37	28
"Just enough to get by"	32	27	34	36	43	32	22	22	22	22	25	17
"Can't make ends meet"	8	9	7	13	10	14	4	5	2	5	4	6
	Blacks											
Sample n	391	123	268	187	49	138	183	141	42	52	41	11
Total percent	100	100	100	100	100	100	100	100	100	100	100	100
"Always have money leftover"	3	3	3	7	6	8	4	6	0	10	11	b
"A little extra sometimes"	20	20	21	18	19	18	42	40	46	41	42	b
"Just enough to get by"	51	54	50	48	42	50	41	42	36	36	33	b
"Can't make ends meet"	25	23	26	26	33	23	13	12	18	14	14	b

[a] Includes all men who had retired by the time of the 1980 survey.
[b] Percentage not calculated where base is smaller than 20 sample cases.

with those of nonretired men, cross-classified by age, race, and marital status. Overall, a majority of the married retirees and almost one-half of the nonmarried profess to do better than "just get by" on their current income, while 9 percent and 15 percent, respectively report that they cannot make ends meet. On the basis of this criterion, the differences between retired and nonretired men are probably not as great as the differences in their incomes would lead one to expect. Among the married men, 59 percent of the retirees and 72 percent of the nonretired do better than just get by; the proportions who can't make ends meet are 9 and 5 percent respectively. The differences in the case of the minority of men who are not married, however, are greater. Using questions fairly similar to ours in a survey of a national sample of all men age 65 and over, Louis Harris and Associates (1981, p. 72) found that 52 percent do better than "just get by."

There are very profound racial differences in the response pattern. Indeed, the interracial differences within each retirement category are greater than the differences between retired and nonretired men of each race, and these racial differences are especially pronounced among the retirees who are married. Within this group 25 percent of the blacks and 8 percent of the whites report that they cannot make ends meet, while 3 percent and 21 percent, respectively, report that they can save regularly. There are no substantial or systematic age differences among the retired or the nonretired of either race. However, it should be kept in mind that the age range of the sample is relatively small: the oldest men in the 65 or older group are only 73 years of age.

Summary

Of the more than six million men age 59 to 73 in 1980 who had retired between 1967 and 1978, fewer than 5 percent had been unwillingly removed from jobs by mandatory retirement, in contrast to more than one-third whose retirement appears to have been induced by poor health. A majority, however, retired completely voluntarily.

Irrespective of reason for retirement, only a minority of the men manifested any interest in labor market activity as of 1980. Sixteen percent were either working or looking for work in the survey week and 23 percent had worked in the past year; of the remainder, only one percent explained their absence from the labor market by a perception that no jobs were available, and only 15 percent said that they would (3 percent) or might (12 percent) take a job, in response to a hypothetical job offer. Thus, at best only two-fifths of the total group of retirees are in any meaningful sense available for work; the remainder either have health problems that discourage labor market activity or simply do not choose to work. The minority of retirees who were in the labor force in 1980 differed significantly in a number of respects from the majority who were not. A multivariate analysis demonstrates that the likelihood of post-retirement labor market activity declines precipitously with advancing age even within the relatively narrow span of years from 54 to 73, and with increasing severity of health problems. Men who had been in professional or managerial jobs prior to their retirement and those who expressed relatively unfavorable attitudes toward retirement had above average participation rates. On the other hand, retirees who received more income (exclusive of their own earnings) were less likely than others to be holding jobs or seeking work.

Nine out of ten retirees receive Social Security (or Railroad Retirement) benefits, and three-fifths receive other pensions, predominantly from private employers but also from public sector employers and from unions.

Nevertheless, substantial proportions have one or more additional sources of income: wage or salary income (17 percent), self-employment earnings (10 percent), wife's earnings (20 percent), public assistance (8 percent), and other sources (64 percent). Thus, only 9 percent of the retirees live on pension income alone, although this source accounted for almost three-fifths of the retirees' average family income of $15,300 in 1979.

The average proportion of pre-retirement earnings represented by public and private pensions (replacement rate, expressed in terms of dollars with 1980 purchasing power) is 47 percent, but there is considerable variation around this mean. For about one-seventh of the retirees the replacement rate is under 25 percent; for more than one-tenth it is 70 percent or higher. Men with Social Security benefits alone have an average replacement rate of 44 percent; those with both Social Security and other pensions have a rate of 51 percent; those with only pensions other than Social Security (primarily government workers) have a rate of 41 percent. Replacement rates of persons who receive Social Security benefits vary dramatically with pre-retirement earnings levels, because of the subsidy inherent in the Social Security benefit formula. Only at the low end of the income scale (earnings of $10,000 or less in terms of 1980 dollars) is the replacement rate sufficient to maintain the pre-retirement standard of living during retirement, when reductions in taxes and expenses attributable to working are taken into account.

Replacement rates also vary with other characteristics of retirees. They are higher for married than for unmarried men, reflecting the benefit provisions of the Social Security program; and lower among men whose pre-retirement jobs were in manufacturing and trade than in transportation and utilities, reflecting differences in the extent and character of private pension coverage.

When the course of median real family income of married retirees is examined over time, two trends are evident. First, the level of 1980 income is higher for more recent than for earlier retirees. Second, for each cohort of retirees real family income has moved downward over time, resulting largely from decreased post-retirement labor force participation of both retirees and their wives as time goes on.

Whatever their actual income, a very large majority of retirees profess to be able to "get by" on their income, although there are pronounced variations between nonmarried and married men in favor of the latter and even larger ones between blacks and whites. Nonetheless, for the married men of both races, 59 percent report that they do better than just get by, while 9 percent assert that the "cannot make ends meet." By way of comparison, the corresponding proportions for nonretired men are 72 percent and 5 percent.

Footnotes

[1] The early retirees also include men covered by a mandatory plan who retired prior to the prescribed age; normal retirements include men who retired at the mandatory age and had previously indicated no desire to work longer.

[2] In each survey respondents are asked if they are covered by a mandatory retirement plan. Those who respond affirmatively are asked what the mandatory age is and "would you work longer than that if you could?" Persons who respond "yes" are classified in the mandatory retirement group if they retire at the mandatory age.

[3] Specifically, this category includes men who (a) reported poor health as the reason for having left their pre-retirement job; (b) reported poor health as the reason for absence from the labor force in the 12-month period prior to the report of retirement; (c) revised their expected age of retirement downward for health reasons in the survey preceding retirement; (d) specified poor health as the reason for not seeking work either in the year of retirement or in the preceding year; (e) reported an inability to work in the survey in which retirement was first reported or in the preceding survey; or (f) reported a work-limiting health problem in each of the two surveys preceding the survey in which retirement was reported. Very few respondents fell into the health retirement category solely by virtue of this last criterion.

[4] The questions were designed to measure a generalized attitude toward retirement rather than the respondent's reaction to his own retirement. On a four-point scale, respondents were asked to indicate the extent of their agreement with each of the following statements: (1) retirement is a pleasant time of life; (2) people who don't retire when they can afford to are foolish; (3) older workers should retire early when they can, so as to give younger people more of a chance on the job; (4) work is the most meaningful part of life; (5) most people think more of someone who works than they do of someone who doesn't.

[5] The same question was asked with respect to weeks during the preceding 12 months that the individual was out of the labor force. Responses are so similar to those for the survey week that they are not shown.

[6] Precoded responses were: yes, definitely; yes, if it is something I can do; yes, if satisfactory wage; yes, if satisfactory location; yes, if satisfactory hours; yes, (if other); no, health won't permit; no, don't want to work, retired; no, don't need the money; no, other.

[7] We are grateful to Alan Fox of the Social Security Administration's Division of Retirement and Survivors Studies for helpful comments on an earlier draft of this section.

[8] See, also, James H. Schulz (1980, p. 78). Schulz's estimate for a "middle income worker" is 65-70 percent, comparable to Munnell's estimate for the same income level.

[9] We also calculated replacement rates using the average of a two-year period

in the denominator. The patterns were very similar to those yielded by the one-year income figures. The latter were used because they result in fewer cases of missing data. For other methods of calculating replacement rates and for an analysis of such rates based on the Retirement History Study, see Fox (1982).

[10] About 2 percent of the retirees--23 sample cases--received neither Social Security nor other pension income in 1980.

[11] For a detailed description of the OASDHI program, see Meyers (1981).

[12] To be eligible for some OASI retirement benefits the age group of men under consideration here would have needed only 40 calendar quarters of self-employment income (of at least $400 per year) or of earnings in covered employment (of at least $50 per quarter). The earnings in covered employment might have been achieved at any time from 1937 on; the self-employment income at any time after 1950. Clearly, it would not be difficult for individuals whose principal careers were in noncovered government employment (and who earned full pensions there), to have achieved eligibility for at least minimum Social Security benefits as well.

[13] Economic Report of the President, 1981, Table B-27 p. 264.

Appendix Table 2A.1 Mean Total Family Income of Retirees, by Source of Income, Race and Marital Status, 1980

	Total			Whites			Blacks		
Source	Total	Married	Unmarried	Total	Married	Unmarried	Total	Married	Unmarried
Sample n	1591	1288	303	1162	990	172	429	298	131
Total family income[a]	15,308	16,335	10,345	15,888	16,851	10,883	8,302	8,938	6,876
Retiree's earnings	1,017	1,095	641	1,074	1,150	681	326	287	391
Retiree's self-employment income	391	363	529	418	382	608	68	84	32
Wife's earnings or self-employment income	1,230	1,487	-	1,282	1,528	-	604	873	-
Social Security or Railroad Retirement	4,778	5,053	3,466	4,864	5,114	3,572	3,744	4,167	2,795
Retiree's pension	3,936	4,164	2,796	4,092	4,308	2,976	2,040	2,196	1,680
Wife's pension	264	324	-	276	336	-	108	156	-
Public assistance	98	88	152	80	75	114	320	292	381
Financial assistance from relatives	19	19	20	21	21	23	0	0	0
Income of other family members	895	812	1,293	889	825	1,222	968	624	1,739
Other income	2,501	2,715	1,480	2,696	2,886	1,713	161	229	7
Sum of components[a]	15,129	16,120	10,377	15,692	16,625	10,909	8,339	8,918	7,025

[a] Components do not add to total family income because family is coded NA if information is not available for one or more components.

Chapter 3

Social Psychological Aspects of Retirement

We turn now to an examination of some of the noneconomic facets of the retirement experience. Starting with an analysis of the leisure time activities of retirees in comparison with those of men who have not yet retired, we next examine the retirees' evaluation of their decision to retire, and conclude with an investigation of sources of variation in their satisfaction with life. The life satisfaction of retirees is compared with that of comparable nonretired men in order to assess the effect of retirement on psychological well-being.

I. LEISURE ACTIVITIES

Gerontological literature contains numerous studies of the leisure activities of the elderly (Bossé and Ekerdt, 1981, references; Harris, 1981; Longino and Kart, 1982; Roadburg, 1981, references; Weiner and Hunt, 1981, references), and some have focused on the impact of retirement (Bell, 1975; Bossé and Ekerdt, 1981; Foner and Schwab, 1981; Palmore, et al., 1979; Peppers, 1976; Simpson, et al., 1966). Many of the studies have aimed at testing competing theories of aging. Disengagement theory (Cumming and Henry, 1961) views aging as an inevitable period of withdrawal desired by both the individual and society. In contrast, activity theory (Havighurst and Albrecht, 1953) holds that high activity levels maintained into old age increase life satisfaction, and that if withdrawal from society occurs, the aging individual is the passive victim rather than the initiator of such disinvolvement. Kleemeier (1964) has pointed out that leisure activities may substitute for work "in creating good morale and high life satisfaction in the later years" (p. 183). Atchley (1971), in support of "continuity theory" suggests that leisure can have a great deal of positive value as a "bridge between pre- and post-retirement life..." (p. 17). A comprehensive review of the literature on adjustment to retirement (Friedmann and Orbach, 1974) concludes that "there is no basis for the assumption that retirement causes or necessarily results in a constriction of life space and activity..."

Despite the considerable work that has been done, it is not easy to be satisfied with what is known about the patterns of leisure activity among the elderly and, in particular, about the differences in this regard between retired individuals and those who have remained at work. Except for the single tabulation provided by Foner and Schwab (1981), the limited number of studies of the latter issue have been based upon very small samples that do not purport to be representative; moreover, none has raised the question whether the factors related to variation in leisure activity are the same for retired and nonretired men. In this section we attempt to meet these shortcomings of previous research.

Our concern with the leisure activities of the NLS sample is threefold. First, we describe the patterns of leisure activity of retired and nonretired men and identify the characteristics that are associated with variation in those patterns. Second, controlling for other differences between retired and nonretired men, we measure the nature and extent of the difference in leisure activities between the two groups, interpreting whatever differences we find as reflecting the effect of retirement.[1] Third, the extent of leisure activity will be used as an explanatory variable in the third section of the chapter, which examines variations in life satisfaction among retirees and between retired and nonretired men.

No definition of leisure is universally accepted, although it generally connotes time spent in activities other than work for pay or personal maintenance (Kaplan, 1961; Kleemeier, 1964, Robinson, Ch. 4, 1977). This uncertainty gives rise to the question whether the meaning of leisure changes once an individual loses or abandons his or her primary labor market role (Hendricks and Hendricks, 1977; Roadburg, 1981). In any case, most investigations of leisure time pursuits have attempted to obtain some measure of the amount of time--either in relative or absolute terms--that the individual has spent in a variety of specified activities (Harris, 1981; Bossé and Ekerdt, 1981). In the present case, the 1978 interview schedule asked respondents whether they had engaged in each of six different types of activity during the preceding twelve months: (1) sports or exercise (e.g., golf, tennis, swimming); (2) reading books, magazines or newspapers; (3) hobbies (e.g., collections, woodworking, playing a musical instrument, or gardening); (4) visiting with friends or relatives; (5) working on home maintenance or home repairs around the house; (6) doing volunteer work. For each affirmative response, the individual was asked during how many weeks he engaged in the activity and, on average, about how many hours per week he was thus involved.

On the basis of the resulting data, we have constructed two variables for each type of activity: (1) a dichotomous variable indicating whether the respondent engaged in the activity and (2) the total number of hours (weeks x weekly hours) that he spent on the activity. The latter has also been summed across the six activities to provide an aggregate annual figure.

The limitations of these data are self evident. To begin with, this method of obtaining information on the amount of time devoted to various activities is not as reliable as the use of time diaries (Robinson, 1977). Second, we clearly cannot claim that all forms of leisure activity are included in the data. On the basis of a recent national survey that included a larger number of activities (Harris, 1981), the most important omission from the NLS data is watching television. Because this is an activity that occurs predominantly in the home, it seems likely that its omission results in an understatement of the amount of leisure activity of retired as compared with nonretired men.

Gross Relationships: Retirement Status and Race

One of the presumed attractions of retirement is the opportunity it provides for greater leisure. However, the limited evidence thus far available suggests that retirees engage in substantially the same general types of leisure activities as they pursued while working (Peppers, 1976), and at least one study (Bossé and Ekerdt, 1981) has found no increase in perceived involvement in leisure activities as the result of retirement. As has been noted above, however, the issue has not yet been examined on the basis of a representative national sample.

Table 3.1 stratifies the total NLS sample by retirement status and race, and shows for each group the degree of participation in the six types of leisure activity specified in the 1978 interview schedule. It must be borne in mind that the table displays gross differences among the several categories of men--i.e., unadjusted for differences in other characteristics that may be related to retirement status or race.

For the total sample, reading and visiting are by far the most popular leisure time activities, engaged in by over 85 percent of the respondents. At the other extreme is volunteer work, which occupies only one in five of the men. Between these, in descending order of frequency, are home maintenance work (67 percent), hobbies (53 percent), and exercise (40 percent). Among

Table 3.1 Number of Hours Per Year Devoted to Specified Leisure Activities, by Retirement Status and Race, 1978

(Percentage distributions)

Activity	Total (n=2899)						Whites (n=2087)						Blacks (n=812)					
	Total	None	1-250 hours	251-500 hours	Over 500 hours	Mean[a]	Total	None	1-250 hours	251-500 hours	Over 500 hours	Mean[a]	Total	None	1-250 hours	251-500 hours	Over 500 hours	Mean[a]
	Total																	
Exercise	100	60	28	7	5	247	100	59	29	7	5	247	100	78	16	3	2	235
Reading	100	12	26	29	33	484	100	10	25	29	35	492	100	33	31	22	14	346
Hobbies	100	47	35	10	8	251	100	46	36	10	8	255	100	63	30	4	3	179
Visiting	100	14	61	13	12	257	100	13	62	13	12	258	100	22	55	11	12	240
Home maintenance	100	33	55	7	6	158	100	31	56	7	6	160	100	51	41	4	4	133
Volunteer work	100	80	16	2	2	144	100	80	16	2	2	145	100	86	12	2	1	127
	Retired men[b] (n: whites=1254; blacks=504)																	
Exercise	100	62	25	6	7	273	100	60	26	7	7	273	100	80	14	3	3	261
Reading	100	14	24	27	35	490	100	12	23	28	37	497	100	36	30	20	13	355
Hobbies	100	46	35	11	9	273	100	44	35	11	10	279	100	65	29	3	3	159
Visiting	100	15	58	14	14	274	100	14	58	14	14	275	100	25	51	11	13	252
Home maintenance	100	37	50	7	6	170	100	35	52	7	7	173	100	59	34	4	3	134
Volunteer work	100	81	14	3	2	174	100	81	14	3	2	175	100	85	12	2	1	144
	Never-retired men (n: whites=833; blacks=308)																	
Exercise	100	58	32	7	3	176	100	57	33	7	3	176	100	75	20	4	1	189
Reading	100	10	29	31	31	431	100	8	29	32	32	437	100	28	32	25	15	342
Hobbies	100	50	37	8	5	202	100	50	37	8	5	202	100	60	30	6	4	204
Visiting	100	13	67	12	9	212	100	13	67	12	8	212	100	18	61	12	9	216
Home maintenance	100	27	63	7	4	129	100	26	64	7	4	129	100	40	52	4	5	132
Volunteer work	100	79	19	2	1	105	100	78	19	2	1	106	100	86	13	1	c	97

[a] Excluding those who do not engage in the activity.

[b] Men who had retired between 1965 and 1978. For definition of retirement, see text, Chapter 1.

[c] Less than 0.5 percent.

those who engage in the activities there is less variation in average number of hours devoted to them, ranging from about 485 hours in the case of reading to about 150 each for home maintenance and volunteer work. Relatively little variation appears among the participants in the amount of time they devote to each activity, except for reading. In that case, the large majority of men who report spending some time reading are fairly equally divided between those who spend under 250 hours per year, those who spend between 251 and 500 hours, and those who read for more than 500 hours. In the case of each of the other activities, between two-thirds and four-fifths of the participants spend no more than 250 hours per year--or about five hours per week on the average. Black men are much less likely than whites to engage in each of the activities, the difference being about 20 percentage points or more in the case of reading, exercise, and hobbies.

The relative popularity of the several types of activity is identical for retired and nonretired men and, indeed, there is little difference between the two groups in the incidence of each activity, except for the lesser participation of the retired men in home maintenance (63 percent versus 73 percent). As would be expected, however, retired men spend more time at each activity than the nonretired, although this relationship does not hold for the black men.

Taking all of the activities together, the typical respondent estimated spending about 1,000 hours per year--in the neighborhood of 20 hours per week (Table 3.2). For black men, however, the amount of time was only two thirds as great as for whites. As would be expected, the dispersion around this average is considerably greater than in the case of individual activities; one in seven of the men spent fewer than five hours per week on all activities combined, but one in five devoted as many as 29 hours a week to them. For

Table 3.2 Total Number of Hours Per Year Devoted to Specified Leisure Activities, by Retirement Status and Race, 1978

(Percentage distributions)

Number of hours	Total			Retired men			Never-retired men		
	Total	Whites	Blacks	Total	Whites	Blacks	Total	Whites	Blacks
Sample n	2703	1941	762	1638	1162	476	1065	779	286
Total percent	100	100	100	100	100	100	100	100	100
None	2	1	5	2	2	7	1	1	3
1-250	12	10	30	11	10	33	12	11	24
251-500	15	15	21	14	14	19	17	16	24
501-1000	32	33	23	28	28	18	39	39	30
1001-1500	20	20	12	20	21	13	19	19	11
1501-2000	10	10	4	11	12	5	7	8	3
Over 2000	10	10	6	13	14	6	5	5	5
Mean[a]	1001	1031	647	1100	1140	637	851	867	663

[a] Includes men who spent no time on any of the activities.

both races combined, retired men spent more time on the specified activities than men who had never retired, but the difference was attributable solely to the whites. The very small difference among blacks was actually in favor of the never-retired men.

Multivariate Analysis

Total sample What characteristics of older men are associated with the variation in the amount of time devoted to the specified leisure time activities? This question is addressed for the entire sample of men as well as for the retirees and nonretirees separately by the data shown in Table 3.3. The table presents the results of three separate multiple classification analyses (MCA): one for the total sample, in which retirement status is introduced as one of the explanatory variables, a second for retired men, and the third for nonretirees. In each of the latter two a work activity variable is included which, for the retirees, differentiates those who worked at all from those who did not and, for the nonretired men, distinguishes between men who worked at least 2,000 hours and those who worked less than that.

With other characteristics of the men controlled, retirement status makes a more substantial difference than is indicated by the bivariate relationship shown in Table 3.2. Retired men devote 47 percent more time than their nonretired counterparts to the types of leisure time activity we have inquired about--a differential of about seven hours a week in contrast to the less than 4.8 hour difference shown by the bivariate data.

The gross racial difference that has been observed for the total sample in the bivariate relationships shown in Table 3.2 is maintained even with other characteristics controlled. Other things being equal, black men in the age group under consideration devote about three fewer hours per week than whites to the specified activities. This finding suggests that the standard questions on leisure time activities probably have a cultural bias, and that a serious effort to explore racial differences in leisure activities would require a different approach. Consistent with this interpretation is Neulinger's (1981) observation that there are good theoretical reasons for expecting major differences in leisure behavior between whites and blacks. "Leisure behavior is part of one's cultural heritage, and the American black certainly had a cultural background different from the average white American...their job was to make leisure possible for everyone except themselves" (p. 126). Additional evidence of this phenomenon emerges from our own work; in an earlier version of the MCAs we stratified by race and found that few of the relationships for the whites prevailed for the blacks. The results that are presented here should therefore be interpreted as applying basically to white men.

Both family income and occupational level (of current job for the nonretirees and of pre-retirement job for those who have retired) bear pronounced positive relationships with the amount of time spent in leisure time activity, at least among white men. The difference between the professional and managerial categories at one extreme and blue collar workers at the other amounts to more than 300 hours per year, or over six hours per week. With regard to income, a difference of about the same magnitude separates those with incomes under $5,000 per year and those earning over $10,000, although the highest income group ($20,000 or more) devotes slightly fewer hours to leisure time activity than the next lower category.

The fact that occupational level and income exercise independent effects on what might be described as the purposeful use of leisure time has important implications. It suggests that the kind of work that men do influences leisure activities not only through the income that it generates, but also by conditioning (or reflecting) their interests. If participation in leisure activities contributes to satisfaction, one might therefore expect men who have retired from high level jobs to manifest above average satisfaction with retirement even when such factors as income and health are held constant.

Neither age nor marital status shows a significant relationship to the measure of leisure time activity, but health condition manifests a strong effect. Men with substantial or severe impairments devote significantly less time to the specified activities than men with less serious (or no) handicaps. Certain aspects of residence also bear a relationship with the extent of leisure time activity. Men residing in the south spend less time than those residing elsewhere; similarly, residents of very large communities devote less time to the specified activities than those in areas with smaller populations.

Stratification by retirement status An interaction between retirement status and some of the other variables is evident in Table 3.3. To begin with, the racial difference that prevails in the total sample is pronounced among retirees, but does not exist among men who have not retired--another finding that supports the cultural difference hypothesis mentioned above. The health variable is also nonsignificant among the men who are not retired, presumably because even the relatively few who are classified as having substantial impairments are not handicapped to the same degree as men in that category who have stopped working. Size of community doesn't make the same difference among working men as it does for the retired group. There is also a curious interaction between retirement status and age. Whereas no significant age differences appear among the retired men, the oldest five-year age category of nonretirees devotes a significantly larger number of hours to

Table 3.3 Total Number of Hours Per Year Devoted to Specified Leisure Activities, by Selected Characteristics, 1978

(MCA results)

	Total sample		Retired men		Never-retired men	
Characteristic	n	Adjusted[a] # of hours (F-ratio)	n	Adjusted[a] # of hours (F-ratio)	n	Adjusted[a] # of hours (F-ratio)
Total sample	2703	1001	1638	1100	1065	851
Retirement status		(153.090)**				
Never retired	1065	778**	d		d	
Retired	1638	1147**				
Race		(10.195)**		(10.358)**		(0.576)
Whites	1941	1014**	1162	1119**	779	855
Blacks	762	841**	476	874**	286	804
Age		(1.230)		(0.209)		(3.001)*
57-61	1019	985	333	1110	686	848
62-66	941	990	639	1078	302	818
67-71	743	1038	666	1112	77	1000*
Marital status		(0.437)		(0.018)		(0.076)
Married	2226	1004	1312	1100	914	849
Nonmarried	477	977	326	1093	151	864
Physical or mental impairment, 1976[b]		(16.271)**		(5.468)**		(0.182)
None	1050	1068**	473	1150	577	856
Minor-moderate	1081	1023	672	1136	409	847
Substantial-severe	553	798**	483	975**	70	814
Total family income, 1977		(10.744)**		(6.220)**		(3.107)**
Less than $5,000	336	808**	293	946*	43	762
$5,000-9,999	520	945+	412	1072	108	728+
$10,000-14,999	382	1100**	241	1235**	141	801
$15,000-19,999	284	1153**	119	1283*	165	948*
$20,000 or more	498	1078*	179	1208	319	901+
Occupation		(16.858)**		(8.645)**		(9.347)**
Professional	229	1200**	126	1254*	103	1076**
Managerial	360	1182**	198	1327**	162	930*
Other white collar	265	1137**	152	1272**	113	934
Craft	759	837**	506	938**	253	718**
Other blue collar	479	847**	308	992*	171	668**
Other	603	990	344	1068	259	852
Region		(11.178)**		(4.724)*		(5.741)*
South	1038	928**	673	1037*	365	782*
Nonsouth	1665	1033**	965	1132*	700	877*
Size of community		(2.918)+		(4.442)*		(0.363)
Small	960	1008	597	1134	363	837
Medium	1111	1028+	689	1127	422	868
Large	632	937*	352	976**	280	839
Work activity, 1978				(3.344)+		
None	d		1157	1135*	d	
Some			477	1021*		

Table 3.3 (continued)

Characteristic	Total sample		Retired men		Never-retired men	
	n	Adjusted[a] # of hours (F-ratio)	n	Adjusted[a] # of hours (F-ratio)	n	Adjusted[a] # of hours (F-ratio)
Hours worked, 1978						(0.194)
Less than 2000	d		d		233	844
2000 or more					817	854
Attitude toward retirement, 1978[c]	d			(8.524)**	d	
Favorable			495	1242**		
Ambivalent			630	1068		
Unfavorable			400	1011*		
Reason for retirement	d			(8.313)**	d	
Forced			60	1232		
Health			683	951**		
Voluntary early			678	1204**		
Voluntary normal			216	1151		
Adjusted R^2		0.12		0.14		0.07

[a] For nature of adjustment, see Chapter 2, Table 2.6, note a.

[b] For construction of impairment index, see Chirikos and Nestel (1981).

[c] See text footnote 2.

[d] Not included in regression.

**Significant at the .01 level.
* Significant at the .05 level.
+ Significant at the .10 level.

the specified activities than the two younger groups. Finally, although the variable is defined differently for the retired and nonretired groups, the extent of work activity bears a significant negative relationship to leisure time activity among retired men, but not among their nonretired counterparts.

Two additional variables have been used in the MCA for retirees to ascertain whether the circumstances under which retirement occurred and the respondent's general attitude toward retirement are related to the extent of their leisure activities. The reason for retirement turns out to be highly significant; men who retired for health reasons devote considerably less time to the specified pursuits than voluntary retirees--especially the subset of the latter who retired prior to age 65. Since this difference is net of the differences in the extent of impairments in 1976, it suggests either that the impairment index does not reflect the full extent of health differences among the several groups of retirees or that, irrespective of current state of health, men who were forced by bad health to retire were psychologically less disposed than other men to develop interests in the types of leisure activities covered by the survey.

The strong positive relationship between attitude toward retirement and extent of leisure time activity is difficult to interpret confidently because the two variables were measured at the same time, making the direction of causation ambiguous. However, because the attitudinal variable purports to measure a generalized reaction to the idea of retirement rather than the degree of satisfaction with the retired status,[2] it seems to us reasonable to conclude that men who hold favorable views of retirement are more likely to develop purposeful uses of leisure during their own retirements.

Variation in pursuit of specific activities We turn now to a disaggregation of the results just described. Separate MCAs, comparable to those displayed in Table 3.3, have been run for each of the six leisure activities. In each case the dependent variable has been specified in two forms: (a) a dichotomous variable indicating whether the respondent engaged in the specified activity and (b) a continuous variable showing, for those who had participated, the number of hours per year. Moreover, there are two versions of each MCA--one for retirees and one for nonretired men. In each case the explanatory variables are identical to those shown in Table 3.3. We have also run a series of MCAs for the total sample using the retirement status variable. From these we have extracted the adjusted values for the retirement status variable, and these are presented in Table 3.4.

Retirement increases significantly the likelihood of engaging in physical exercise, hobbies, and volunteer work, but makes no significant difference in regard to reading, visiting, and home maintenance. When attention is confined to those who participate in each activity, retired men spend significantly more time than their nonretired counterparts on every activity. The difference is greatest in the case of exercise--137 hours per year, or a little over 2.5 hours per week. For each of the other five activities in which the difference is significant it is less than 100 hours per year.

The complete results of all 24 MCAs (6 activities x 2 dependent variables x 2 samples) are too voluminous to present here. Table 3.5 contains summaries of these results, showing the relationships between all the explanatory variables and each dependent variable for every activity. To use the upper portion of the table as an illustration, we see that the retired married men (in row three) are significantly more likely than nonmarried men, other things being equal, to devote some time to hobbies, home maintenance activities, and exercise, but that otherwise there are no differences by marital status. Attitude toward retirement (in the last row) bears a significant positive

Table 3.4 Adjusted[a] Incidence and Number of Hours of Participation in Specified Leisure Activities, by Retirement Status, 1978

(MCA results)

Activity	Adjusted[a] percent participating		Adjusted[a] hours of participants	
	Retired	Never retired	Retired	Never retired
Exercise	44**	35**	304**	167**
Reading	89	87	518**	437**
Hobbies	57**	46**	285**	193**
Visiting	87	85	283**	218**
Home maintenance	67	68	191**	115**
Volunteer work	21*	18*	178**	97**

[a] Adjusted for the effects of all of the variables used in the MCA for the total sample, shown in Table 3. For nature of the adjustment, see Chapter 2, Table 2.6, note a.

**Significant at the .01 level.
* Significant at the .05 level.

relationship to the likelihood of participation in all forms of leisure time activity except volunteer work and reading.

The most important generalizations yielded by Table 3.5 may be summarized briefly:

1. By and large the relationships for retired men are fairly similar to those for the never-retired sample, although the relationship of marital status to the incidence of the activities is a perplexing exception. Married retirees are more likely to engage in all activities except reading, visiting, and volunteer work, while nonretired married men are more likely to spend time visiting and on hobbies and home maintenance.
2. The explanatory variables are more strongly and consistently related to the likelihood of participation in the several forms of leisure time activity than to the amount of time that participants devote to them. This is consistent with our finding greater variation in the incidence of participation than in the number of hours devoted by the participants.
3. Within the 15-year age range represented by the NLS sample, age rarely manifests an independent relationship with participation in any of the leisure activities, but the negative relation with the likelihood of engaging in exercise is a prominent exception. On the other hand, older retirees devote more time to reading than their younger counterparts.
4. Inexplicably, degree of physical or mental impairment of retirees bears a strong negative relationship only with the likelihood of engaging in reading and home maintenance activities. However, such impairment does display a strong negative effect on number of hours

Table 3.5 Relation Between Specified Leisure Activities and Selected Characteristics of Men 57-71 Years of Age, 1978
(Summary of MCA results)[a]

Characteristic	Retired						Never retired					
	Exercise	Reading	Hobbies	Visiting	Home maintenance	Volunteer work	Exercise	Reading	Hobbies	Visiting	Home maintenance	Volunteer work
	Incidence of participation											
Race (being black)	-	-	-	-	0	0	0	-	0	0	0	0
Age	-	0	0	0	0	I	-	0	0	0	0	-
Being married	+	0	+	0	+	0	0	0	+	+	+	0
Owning home	b	b	b	b	+	b	b	b	b	b	+	b
Physical or mental impairment[c]	I	-	0	0	-	0	0	0	0	0	I	0
Family income	+	I	+	0	+	+	+	+	+	0	0	I
Occupational level	+	I	+	I	0	I	+	+	I	0	0	I
Living in south	+	-	-	-	-	0	0	-	+	-	-	0
Size of community	0	0	-	-	-	-	0	0	0	0	-	-
Work activity	0	0	0	0	0	0	0	0	+	0	0	0
Retired for health	-	-	0	-	-	-	b	b	b	b	b	b
Favorable retirement attitude	+	0	+	+	+	0	b	b	b	b	b	b
	Number of hours											
Race (being black)	0	-	0	0	0	0	0	0	0	0	0	0
Age	0	+	0	0	I	0	0	0	0	0	0	0
Being married	0	0	0	0	0	0	0	0	0	0	0	0
Owning home	b	b	b	b	+	b	b	b	b	b	0	b
Physical or mental impairment[c]	-	0	0	0	0	0	-	0	0	0	0	0
Family income	I	0	I	0	0	I	0	0	0	0	0	0
Occupational level	0	+	I	0	0	0	0	+	0	0	0	0
Living in south	0	0	0	0	0	0	0	0	0	0	-	0
Size of community	0	0	0	-	+	+	0	0	0	0	0	0
Work activity	-	0	0	0	0	0	-	0	0	0	0	-
Retired for health	0	0	-	0	0	0	b	b	b	b	b	b
Favorable retirement attitude	0	I	0	+	0	0	b	b	b	b	b	b

Note: Each symbol describes the relationship that has been found between the explanatory variable shown in the stub and the dependent variable in a multiple classification analysis that has been performed for each specified type of leisure activity (see text for further detail). A "+" signifies a positive relationship significant at the .05 level; a "-" signifies a negative relationship significant at the .05 level; a "0" signifies no significant relationship; an "I" signifies a significant irregular relationship.

[a] For description of MCA, see text.

[b] Variable not included.

[c] For construction of impairment index, see Chirikos and Nestel (1981).

of exercise for both retired and never-retired men.

5. Occupational level and family income display the same independent effects on the likelihood of participating in many forms of leisure pursuits as have been noted in the case of total hours of leisure activity. Moreover, occupational level bears a strong positive relationship with number of hours devoted to reading. With this exception, the income and occupation variables display no regular relationship with the number of hours that participants devote to the activities in which they engage.
6. Among retirees black men are significantly less likely than their white counterparts to devote time to all activities except volunteer work and home maintenance. The racial difference is less pronounced among nonretired men and is strongly significant only for reading. Among the participants in each activity there is no racial difference in number of hours, except that black retirees devote fewer hours to reading that their white counterparts.
7. Retirees living in the south are less likely to engage in all activities except volunteer work (no relationship) and exercise, in which they were more likely to participate. Retirees living in larger communities are less likely to participate in most activities.
8. Among retirees, those who retired for health reasons are less likely than voluntary retirees to engage in all the activities except hobbies. Those with favorable general attitudes toward retirement are significantly more likely to engage in every type of activity except volunteer work.

II. RETROSPECTIVE EVALUATION OF THE RETIREMENT DECISION

Two questions in the 1976 and subsequent surveys required the retired respondent to react to his retired status. One asked, "All in all, how does your life in retirement compare with what you expected it to be?" Five response categories were provided, ranging from "much better" through "about the same as expected" to "much worse." The second was "If you had it to do over again, do you think you would have retired earlier, later, or at the same time?"

Retirement Experience Compared with Expectations

Table 3.6 shows the responses to the first of these questions for 1976, 1978 and 1980 for those men who had retired by 1976, classified by reason for retirement. This tabulation allows us to see whether the reaction of the men to their retired status has changed over the four-year period, and whether, at any point in time, differences appear according to the circumstances under which retirement occurred. A substantial majority of the total group of retirees in each year found that retirement equaled or exceeded their expectations. Between 50 and 60 percent found retired life to be about what they had anticipated, while about one-fourth found it even better.

What these results tell us about the degree of satisfaction with retirement is not entirely clear, since we have no pre-retirement measures of the men's expectations. It seems reasonable to believe, however, that these expectations were highly favorable for the voluntary retirees, because that group apparently entered retirement quite willingly without the pressure either of mandatory rules or of poor health. The early voluntary retirees did so before the conventional retirement age, and it is significant that their retirement experience was more favorable relative to their expectations than

Table 3.6 Relation Between Retirement Experience and Expectation,[a] by Reason for Retirement and Race, 1976-1980[b]

(Percentage distributions)

Reason for retirement and year of response	Total race				Whites				Blacks			
	(n) %	Better	About same	Worse	(n) %	Better	About same	Worse	(n) %	Better	About same	Worse
Total, all reasons[c]	(779)				(560)				(219)			
1976	100	22	62	16	100	22	62	15	100	25	48	26
1978	100	26	54	20	100	26	55	19	100	20	50	30
1980	100	29	51	20	100	29	52	19	100	26	47	26
Health	(322)				(217)				(105)			
1976	100	16	53	31	100	16	54	30	100	16	44	40
1978	100	16	48	35	100	16	49	35	100	14	46	40
1980	100	23	47	30	100	23	48	29	100	23	42	36
Voluntary, early	(327)				(245)				(82)			
1976	100	28	66	6	100	28	67	5	100	33	53	15
1978	100	31	56	12	100	32	57	11	100	25	48	28
1980	100	31	56	14	100	30	56	13	100	27	52	20
Voluntary, normal	(100)				(78)				(22)			
1976	100	23	69	8	100	23	69	8	100	24	63	11
1978	100	31	62	7	100	31	62	7	100	35	50	16
1980	100	36	53	11	100	36	53	11	100	34	49	17

[a] Respondents were asked in each year "All in all, how does your life in retirement compare with what you expected it to be?" Five response categories were provided; in this table "much better" and "somewhat better" are combined, as are the corresponding two categories for "worse."

[b] Responses for each year are for the identical group of respondents who had retired by 1976 and who were interviewed in all years.

[c] Includes mandatory retirees, not shown separately.

that of the entire group. About nine out of ten voluntary retirees reported that their expectations were equalled or exceeded. Much less favorable are the reactions of the group who retired for health reasons. In spite of the likelihood that their pre-retirement expectations were less rosy than those of the voluntary retirees, relatively three times as many of them (about one-third) found that retired life was even worse than they had anticipated.[3]

Interesting racial differences appear in reaction to retirement. Black men are consistently more likely than white men to register disappointment with retirement; on the other hand, they are about as likely as whites to state that their expectations have been exceeded. Generalization in this regard is rather difficult, since the pattern for blacks is rather irregular from one year to the next.

Whatever trends there may be over the four-year period covered by the data tend to vary by race and by category of retirees. Black men who retired for health reasons show an improved reaction to retirement, but among voluntary retirees the change is irregular. Among white men the most systematic trend is in the proportion whose expectations have been exceeded by their retirement experience. For every category of retirees, this rises between 1976 and 1980 by between 2 and 13 percentage points. One can conclude at the very least that there is no evidence in these data of a deterioration in the retirees' appraisal of retirement as they aged over a four-year period in which the price level had risen by 45 percent.

When we classify the reactions to retirement expressed by the men in 1980 according to the year in which they retired (Table 3.7), there appears to be a fairly regular pattern for the retirees as a whole: the proportion who have been disappointed increases almost monotonically as the duration of retirement lengthens. The proportion of the most recent retirees (1976-1978) who in 1980

Table 3.7 Relation Between Retirement Experience and Expectation,[a] by Year of Retirement and Reason for Retirement, 1980

Reason for retirement and retirement experience compared with expectation	Year of retirement				
	Total 1967-1978	1967-1969	1970-1972	1973-1975	1976-1978
Total, all reasons[b]					
Sample n	1591	130	360	595	506
Total percent	100	100	100	100	100
Better	28	24	27	27	32
Same	52	47	50	54	52
Worse	20	29	23	18	16
Health					
Sample n	598	83	133	206	176
Total percent	100	100	100	100	100
Better	22	29	15	21	24
Same	48	42	53	47	47
Worse	30	29	32	32	29
Voluntary, early					
Sample n	690	43	170	269	208
Total percent	100	100	100	100	100
Better	31	15	33	29	34
Same	55	55	49	60	54
Worse	14	30	18	11	12
Voluntary, normal					
Sample n	235	0	41	95	99
Total	100	-	100	100	100
Better	34	-	34	33	34
Same	57	-	47	58	60
Worse	9	-	19	10	6

[a] For question on which data are based, see Table 3.6, note a.

[b] Total includes mandatory retirees, not shown separately.

find retirement better than they had expected is 32 percent, compared with 24 percent of those who had retired in the 1967-1969 period; the proportions who find it worse are 16 percent and 29 percent among the two groups, respectively. However, when the data are classified by reason for retirement, the pattern is not nearly so clear. In the case of the men who retired for health reasons, the proportion who expressed disappointment is fairly stable across the several time periods; among early voluntary retirees the same is true for the proportion whose experience exceeded their expectations. Among the voluntary retirees, who retired at age 65 or later, the proportion whose experience exceeded their expectations is the same for all groups from 1970 on. Thus, the pattern that is observed for all retirees combined is at least in part attributable to the fact that the proportion of retirements attributable to health was larger in the earlier than the later years of the period covered. While the data are not inconsistent with what Atchley (1976, p. 69) has referred to as the "honeymoon" and "disenchantment" phases of retirement, we do not believe that they can be interpreted as confirming it. A subsequent multivariate analysis may shed further light on this issue.

Evaluation of Age of Retirement

The second measure of retirees' evaluation of their retirement decision shows a somewhat clearer change between 1976 and 1980 (Table 3.8). In both years a substantial majority indicated that even with the advantage of hindsight they would have retired at the same age, but this majority decreased over the four-year period from three-fourths to two-thirds. In both years the proportion of blacks who endorsed their retirement decision was smaller than that of whites, but the absolute decline between 1976 and 1980 was the same--8 percentage points for both groups.

Table 3.8 "If You Had It to Do Over Again, Would You Retire at the Same Age?": Responses in 1976 and 1980, by Reason for Retirement and Race[a]

Response, by race	Total		Health		Voluntary: early		Voluntary: normal	
	1976	1980	1976	1980	1976	1980	1976	1980
Total race								
Sample n	762	762	334	334	352	352	76	76
Total percent	100	100	100	100	100	100	100	100
Yes	73	66	64	56	79	71	82	78
No, earlier	4	6	3	5	5	7	6	7
No, later	19	24	26	32	15	19	10	11
Don't know	4	5	7	6	2	3	2	5
Whites								
Sample n	561	561	229	229	272	272	60	60
Total percent	100	100	100	100	100	100	100	100
Yes	74	66	64	56	80	71	82	78
No, earlier	4	6	3	5	4	7	7	6
No, later	19	24	26	33	14	20	10	10
Don't know	4	4	7	5	2	3	2	5
Blacks								
Sample n	201	201	105	105	80	80	16	16
Total percent	100	100	100	100	100	100	100	100
Yes	71	63	69	54	72	72	b	b
No, earlier	3	7	1	8	6	6	b	b
No, later	22	20	26	23	19	15	b	b
Don't know	5	10	4	15	4	7	b	b

[a] Tabulation excludes mandatory retirees. Responses for 1976 and 1980 are for the identical group of respondents who had retired by 1976 and were interviewed in both years.

[b] Percentage not calculated where base is fewer than 20 sample cases.

The minority of men in each year who had second thoughts about the age at which they retired were much more likely to report that they would have opted for a later than an earlier age, although a detailed examination of these responses raises some questions as to their validity.[4] However, between 1976 and 1980 the proportion of men choosing each of the two responses increased. Indeed, in relative terms the increase was greater for earlier than for later retirement, especially among blacks.

Variation in the pattern of response among the several categories of retirees is not entirely consistent as between the two races. Those who had retired voluntarily at age 65 or older had the highest proportion who were satisfied with that choice; however, even among them the number who would have opted for a later age exceeded the number who would have chosen an earlier one. The highest proportion of men who would have opted for a later retirement age was among those who had retired for health reasons. As many as one-third of this group responded in that way in 1980.[5] The voluntary early retirees also had a large proportion--one out of every five--who by 1980 would have opted for a later retirement age.

III. SATISFACTION WITH LIFE

To measure the degree of satisfaction with their life situations in 1980, respondents were asked whether they were very happy, somewhat happy, somewhat unhappy, or very unhappy with five aspects of life:[6] their housing, the local area in which they resided, their health condition, their standard of living, and their leisure time activities. In addition, they were asked to indicate by means of the same four response categories how they felt "taking things all together." By assigning values from 1 (very unhappy) to 4 (very happy) to the responses to each component and then summing them, these six questions have been combined into a single "satisfaction-with-life" index ranging between 6 and 24.[7]

Our interest in the index is twofold: (1) as a means of identifying the factors associated with the psychological well-being of retirees and (2) to permit a comparison of the life satisfaction of retired and nonretired men, controlling for factors likely to be correlated both with satisfaction and retirement status. The first of these issues is addressed by Table 3.9 which presents the results of a multiple classification analysis (MCA) of the life satisfaction index for retirees. The size of the sample is larger than in previous tables because it includes men who retired between 1978 and 1980.

Variation in Life Satisfaction of Retirees

In view of the fact that health and standard of living are two components of the index, it is not surprising to find that measures of each of these variables are related to degree of satisfaction. The association is especially strong in the case of health. Each of the two measures of health condition bears an independent relationship to the satisfaction of the retirees. A highly significant 2-point difference appears between retirees who in 1976 had no physical impairments and those who were severely disabled. In addition, men who had no health problems affecting work in 1980 were significantly happier than those with such problems. The relationship of life satisfaction to the net assets reported by the men in 1976 and with their net income in the year preceding the 1980 survey date is completely regular and highly significant.

Regional differences and differences by size of community are very slight, yet provide a basis for believing that retirees in the south are happier than those who reside elsewhere and that those in small and medium

Table 3.9 Life Satisfaction Index of Retirees, by Selected Characteristics, 1980

(MCA results)

Characteristic	n	Adjusted[a] index (F-ratio)
Total sample	1959	20.1
Race		(0.779)
White	1424	20.1
Black	535	20.3
Age		(6.576**)
59-64	615	19.8**
65-69	794	20.2
70-74	550	20.3+
Marital status[b]		(4.219**)
Married, wife healthy	1042	20.3*
Married, wife unhealthy	488	20.1
Other	389	19.8*
Physical impairment, 1976		(21.641**)
None	661	20.6**
Minor	359	20.3
Moderate	476	20.2
Substantial	257	19.4**
Severe	190	18.5**
Health problems, 1980		(33.567**)
No problems affecting work	603	20.8**
Problems affecting work	1315	19.8**
Net assets, 1976		(6.012**)
$15,000 or less	563	19.7**
$15,001-35,000	318	20.0
$35,001-70,000	315	20.4*
Over $70,000	274	20.5*
Total family income, 1980		(6.272**)
$5,000 or less	269	19.7*
$5,001-10,000	429	19.9*
$10,001-15,000	326	20.2
$15,001-20,000	183	20.3
Over $20,000	304	20.7**
Region		(2.746+)
South	782	20.3
Non-south	1177	20.1
Size of community[c]		(2.273)
Small	751	20.2
Medium	784	20.2
Large	424	19.9+
Occupation, pre-retirement job		(1.879)
Professional or managerial	401	20.2
Clerical or sales	191	20.1
Craftsmen	412	20.1
Other	907	20.0

Table 3.9 (continued)

Characteristic	n	Adjusted[a] index (F-ratio)
Class of worker, pre-retirement job		(3.913**)
Government	302	20.3
Private, wage or salary	1254	20.1
Self-employed	287	20.4*
Work status, 1980		(4.607*)
Did not work	1393	20.0*
Worked 1+ weeks	562	20.4+
Extent of leisure activity, 1978		(8.429**)
300 hours or less	334	19.3**
301-600 hours	314	19.9
601-900 hours	286	20.0
901-1200 hours	229	20.5*
Over 1200 hours	500	20.5**
Reason for retirement		(8.754**)
Mandatory	62	19.9
Health	650	19.6**
Voluntary: early	717	20.4**
Voluntary: normal	222	20.3
Attitude toward retirement, 1978		(22.122**)
Favorable	573	20.8**
Ambivalent	768	20.1
Unfavorable	462	19.5**
Retrospective evaluation of retirement[c]		(15.093**)
Would retire earlier	111	20.4
Would retire at same age	1229	20.4**
Would retire later	439	19.4**
R^2		0.32

[a] For a description of index of retirement, see text. For explanation of "adjusted" index, see Chapter 2, Table 2.6, note a.

[b] Health of wife is based on response to question: "Does your wife have any health problems that affect the amount or kind of work she can do?" Yes = unhealthy; no = healthy.

[c] Size of community is based on size of labor force in 1980: small = less than 50,000; medium = 50,000-799,000; large = 800,000 or more.

[d] Includes only men not subject to mandatory retirement.

**Significant at the .01 level.
* Significant at the .05 level.
+ Significant at the .10 level.

sized communities are more contented than those in large metropolitan areas. The relationship with size of community may reflect either the less complicated life or the lower cost of living in smaller communities, or some combination of the two. Men whose pre-retirement work was with government or in self-employment manifest higher levels of satisfaction than those who were wage or salary workers in the private sector. Pre-retirement occupation, on the other hand, bears no independent relationship with life satisfaction.

The relationship between age and life satisfaction is highly significant, with the youngest 5-year age category (59-64) registering lower satisfaction than the other two. The family circumstances of the retirees have a very important effect on their level of happiness. Married men living with their wives are significantly happier than those without wives; moreover, men whose wives are free of health problems appear to have higher levels of satisfaction than those with less healthy wives.

Men who spend considerable time at the more or less purposeful types of leisure activities analyzed in the first section of this chapter are happier than those who do not. Although it is not completely monotonic, a highly significant positive relationship appears between the number of hours devoted to these leisure activities in 1978 and the level of life satisfaction expressed in 1980. Similar relationships between measures of leisure activity and various measures of psychological well-being have been reported in studies of more restricted samples of retirees (Nystrom, 1974; O'Brien, 1981). Not only does leisure activity contribute to life satisfaction of retirees, but labor market activity has a comparable effect. Retirees who performed any work for pay in the 12-month period preceding the 1980 interview registered higher satisfaction than those who did not.

The relationships that have been described up to this point are by no means unique among retired men, but have been found to prevail in the population generally (Campbell, Converse, and Rodgers, 1976) and among a variety of samples of the elderly (Larson, 1978). Moreover, we have run an MCA identical to that shown in Table 3.9 for men in the NLS sample who have not retired as of 1980, and found the same relationships almost without exception.[8] However, in addition to being influenced by these factors, the life satisfaction of retired men depends also on how they view retirement and on the circumstances under which they retired. In the 1978 surveys, all respondents were asked to indicate the strength of their agreement or disagreement with a series of five statements about work and retirement designed to measure their general attitudes toward retirement.[9] Responses to these questions were scored and classified into three categories according to the strength of positive feelings toward retirement. A perfectly consistent and highly significant relationship appears between life satisfaction measures in 1980 and the previously measured attitudes toward retirement.

Quite aside from his attitude toward retirement, the individual's reason for retirement also bears a highly significant relationship to the level of his life satisfaction. Those who retired for health reasons are less happy than those who retired voluntarily, and the small number of men who retired unwillingly as the result of mandatory retirement rules fall between these two groups. The lower index value for the health retirees is especially noteworthy in view of the fact that there are two independent measures of health in the multivariate framework. It seems legitimate to conclude that being compelled to retire because of poor health leads to unhappiness over and above that which is attributable to the poor health condition itself. In addition to the men's attitude toward retirement in general, their attitude toward their own retirement decision bears a strong relationship to their level of life satisfaction. Those who confess that if they had it to do over again they would have retired at a later age manifest a lower level of life satisfaction than those who say they would retire at the same or earlier ages.

With all of the other factors controlled, there is no significant difference in life satisfaction between white and black retirees. An unadjusted difference of 1.1 points on the satisfaction scale in favor of white retirees is reduced to a nonsignificant 0.2 point in the opposite direction in the adjusted values. This finding is consistent with the generalization made by Larson (1978) on the basis of his comprehensive review of the literature on the subjective well-being of older Americans. However, the issue of racial differences in life satisfaction among retirees and in the population generally is complex and unsettled. In earlier versions of our own analysis we ran separate regressions for whites and blacks and found that some of the relationships that were significant for whites were not for blacks (e.g., income, assets, marital status), and other studies have also suggested an interaction between race and some of the determinants of life satisfaction (Campbell, Converse, and Rodgers, 1976). Further research on this issue with more refined methods of analysis is clearly called for (Usui, Keil, and Phillips, 1983).

Retired Versus Nonretired Men

What effect does retirement have upon life satisfaction? Many analogous issues in social science research are at least conceptually amenable to an experimental research design; the effect of retirement on physical or mental well-being, however, is not. Because a large majority of retirements are "voluntary," i.e., not mandated by employer policy, there is no conceivable way of developing randomly selected "treatment" and "control" groups to study the consequences of retirement. Retirement, in other words, depends on individual volition, and this fact not only rules out a truly experimental design, but also raises nagging doubts about an approach that depends upon statistical controls for initial level of psychological well-being of retirees and nonretirees. That is, even if it is possible to measure the dependent variable on the eve of retirement, the suspicion remains that unobserved differences in physical or mental well-being may account to some extent for the decision to retire or to continue working. A finding of poorer health or lower level of life satisfaction on the part of retirees five years later may therefore be indicative merely of unmeasured initial differences between the retirees and nonretirees rather than the effect of retirement. Little wonder that research on the effects of retirement on physical and mental well-being have been evaluated as inconclusive by at least one review of the literature (Minkler, 1981). Larson's (1978) review of the literature on subjective well-being of the elderly observes that many studies have found a positive relationship between employment and well-being, but notes that "because the decision to retire is affected by many factors also related to well-being--particularly health--it is not possible to conclusively infer that this relationship is attributable to retirement."

In the present instance, we cannot even rely on measures of well-being before and after retirement, since the measures of life satisfaction were asked for the first time only in 1976. Our approach is therefore simply to compare retirees with nonretirees, controlling statistically for all of the variables used in the analysis of the retirees. In other words we have performed for the total sample of men interviewed in 1980 an MCA identical to that shown in Table 3.9, except that a variable differentiating between retirees and nonretirees is introduced in place of variables that are relevant only to retirees (e.g., reason for retirement). In addition, we have run the MCA in three additional ways--(1) with the retirement status variable interacted with the respondent's generalized attitude toward work and retirement; (2) without family income among the list of control variables; and (3) with a dichotomous dependent variable based on the single overall life satisfaction question (very happy = 1; all other responses = 0).[10]

The first of these alternative specifications is designed to ascertain whether the effect of retirement on our measure of psychological well-being depends on the individual's general orientation to work and retirement. The second is to see what happens to the measured effect of retirement if no attempt is made to control for income differences between the retired and nonretired men. Since retirement almost inevitably means a reduction in income, to pretend that it does not may actually be an "unfair" test of its impact.[11] The purpose of the third alternative is to see how sensitive our results are to the way in which the dependent variable is specified, and, more particularly, to permit comparison of our results with those of Beck (1982), who used a dichotomous dependent variable,[12] along with a somewhat different set of explanatory variables.

Instead of presenting all of these MCA results, Table 3.10 shows the adjusted life satisfaction index values for retirees and nonretirees in each of the four specifications. To say this in another way, the table shows, for each specification that has been described, how retirees and nonretirees would compare in life satisfaction if each group were "average" with respect to all the other characteristics included in the analysis.[13]

Each of the alternative specifications yields a somewhat different answer to the question whether retirement affects life satisfaction. Using the dichotomous dependent variable, the answer is "no"--the same conclusion produced by Beck's (1982) analysis of the data. The 6 percentage point difference between the proportions of retirees and nonretired men who report themselves "very happy" is reduced to a nonsignificant one percentage point when all the other factors are controlled. Using the life satisfaction index and the complete set of control variables (Specification I) produces a result that is slightly different. The gross difference between the retired and nonretired men shrinks when the other factors are controlled, but the remaining difference in favor of the nonretired is significant at the .10 level.

When the family income variable is omitted from the list of control variables the adjusted life satisfaction index of nonretired men is significantly higher (.05 level) than that of retirees. Thus, if one acknowledges that reduction in total family income is virtually an inevitable aspect of retirement, the conclusion would be that retirement reduces life satisfaction.

Although difficult to interpret because of ambiguities in the direction of causation, the results of Specification III are perhaps the most interesting. If the attitude-toward-retirement index is interpreted as a generalized measure of the respondents' orientation toward work and retirement (rather than a reflection of the retirees' satisfaction with their own retirement), the results suggest that the relative happiness of retired and nonretired men in equivalent circumstances depends on this orientation. Within the group of retirees, the differences in life satisfaction among men with favorable, ambivalent, and unfavorable attitudes toward retirement are significant at the 1 percent level. Those with favorable attitudes have a higher average life satisfaction score and those with unfavorable attitudes a lower score than any of the nonretired groups.

Table 3.10 Net Difference in Level of Life Satisfaction in 1980 Between Retired and Nonretired Men: MCA Results for Four Alternative Specifications

Retirement status (and retirement attitude)[a]	n	Unadjusted index or percent[b]	Adjusted index or percent[b]	F-ratio	R^2[c]
	Specification I: same as Table 3.9				
Total sample	2810	20.4	20.4	3.284+	.26
Retired	1959	20.1	20.3		
Nonretired	851	20.9	20.5		
	Specification II: same as I without income variable				
Total sample	2810	20.4	20.4	6.407*	.26
Retired	1959	20.1	20.3*		
Nonretired	851	20.9	20.6*		
	Specification III: same as I with retirement attitude[a] interaction				
Total sample	2810	20.4	20.4	15.477**	.28
Retired					
Favorable	573	21.1	21.0**		
Ambivalent	768	20.0	20.3		
Unfavorable	462	19.2	19.6**		
Nonretired					
Favorable	183	20.6	20.3		
Ambivalent	310	20.9	20.6		
Unfavorable	292	21.2	20.7*		
	Specification IV: same as I with dichotomous dependent variable				
Total sample	2860	52	52	0.181	.10
Retired	1989	50	52		
Nonretired	871	56	53		

[a] Attitude toward retirement is included only in specification III. For description of variable, see text footnote 2.

[b] For specifications I-III the life satisfaction variable is the index used in Table 3.9. In Specification IV, it is the percent responding "very happy" to the overall life satisfaction question. For the interpretation of the "adjusted" values, see Table 2.6, footnote a.

[c] The R^2 is the adjusted R^2 in the MCA for the given specification.

**Significant at the .01 level.
* Significant at the .05 level.
+ Significant at the .10 level.

Among the nonretired men the relationship between attitude toward retirement and life satisfaction is just the reverse of what is found among the retirees: other things being equal, *workers* with favorable attitudes toward retirement have lower satisfaction scores than those with unfavorable attitudes. The relationship is less pronounced than in the case of the retirees; however it is monotonic, and the satisfaction score of those with unfavorable attitudes to retirement is significantly higher than average. The fact that the relationship between the retirement attitude variable and life satisfaction is positive for retirees and negative for nonretired men means, of course, that the variable is behaving consistently for the two groups. That is, other things equal, *workers* with *favorable attitudes toward work* are happier, and *retirees with favorable attitudes toward retirement* are happier. This tends to increase our confidence that the retirement attitude measure reflects a general orientation to work and retirement.

We believe that the evidence contained in Table 3.10 requires a very cautious conclusion regarding the effect of retirement on life satisfaction. Quite aside from the limitations of cross-sectional analysis for answering a question of this kind, the results are sufficiently sensitive to variations in the specification of the model to warrant suspended judgment. We are not prepared to reject the hypothesis that retirement has no adverse effect on life satisfaction. On the other hand, the significant difference in life satisfaction between retirees and nonretired men when family income is not controlled makes us unwilling to conclude that the actual process of retirement has no effect on psychological well-being. Until we have an opportunity to exploit the NLS data for 1981 in a longitudinal framework we prefer to keep an open mind on the issue.

IV. SUMMARY

Respondents reported in 1978 on the amount of time they had spent during the preceding year on each of six leisure time activities: exercise, reading, hobbies, home maintenance, visiting, and volunteer work. For all members of the sample--retired and nonretired men alike--the men spent on average about 20 hours a week on these activities. Participation rates--which are invariably higher for whites than for blacks--range from an overall average of 88 percent in the case of reading to 20 percent in the case of volunteer work. As would be expected, retirees as a group devote significantly more time to these activities in the aggregate than nonretired men, and have significantly higher participation rates in all activities except visiting and home maintenance. Health, occupational level, and family income all bear positive relationships with the pursuit of purposeful leisure time activity. The fact that occupational level and family income have independent effects suggests that the type of work men do is related to leisure pursuits not only through income but through the character of interests that are associated with different occupational levels.

A very substantial majority of retirees report that their experience in retirement has equaled or surpassed their expectations. On the other hand, about one in five of the whites and one in four of the blacks admit that they have been disappointed. The proportions vary considerably according to the reason for retirement. Men who retired for health reasons have the largest proportion--about one-third--whose experience has been worse than their expectations; among the voluntary retirees the proportion is much smaller, but has manifested a mild upward trend when the men's responses in 1976, 1978, and 1980 are compared. Men who retired early in the 1967-1976 decade had somewhat more negative responses in 1980 than those who retired later, but the trend is not nearly so distinct when reason for retirement is controlled. The data are not inconsistent with the development of a "disenchantment" phase of retirement, but cannot without more refined analysis be interpreted as confirming the phenomenon.

The proportion of retirees who retrospectively endorse the age at which they originally retired is very large, but there is clear evidence of a decreasing trend in the responses between 1976 and 1980--from three-fourths to two-thirds. Of those who would now do things differently, about four times as many would opt for later as for earlier retirement, although both of these responses increased in relative frequency between 1976 and 1980.

Life satisfaction among retirees varies markedly and systematically according to a variety of characteristics. In particular, satisfaction varies directly with health, financial status (income and assets), extent of leisure time activities, participation in the labor market, and being married. The circumstances under which retirement took place and the respondent's general attitudes toward work and retirement are also significantly correlated with degree of life satisfaction. Other things being equal (including current state of health), men who retired for health reasons manifest significantly lower levels of satisfaction than voluntary retirees and than those who were mandatorily retired. The more favorable the retiree's attitude toward retirement in the abstract (as measured in 1978), the more highly satisfied with life he was likely to be (as measured in 1980). With all other factors controlled, there is no difference in level of life satisfaction between white and black retirees.

The impact of retirement on level of life satisfaction has been measured by examining the difference in satisfaction between retired and nonretired men when all of the factors associated with variations in life satisfaction are controlled. This cross-sectional approach has acknowledged limitations as compared with a longitudinal design and, moreover, produces different results depending on the specification of the model. Using the same specification employed for analyzing variation in life satisfaction of retirees, retired men are found to have lower life satisfaction than their nonretired counterparts, but the difference is statistically significant only at the .10 level. With family income uncontrolled, on the other hand, the difference is significant at the 5 percent level, and we recognize that retirement almost always entails a reduction in family income. We opt to reserve judgment on the issue pending a more thorough longitudinal analysis that will include data from the 1981 interviews.

Footnotes

[1] The usual objections to interpreting cross-sectional data in this way carry much less weight when the research design permits statistical controls for other differences between retired and nonretired men, especially age and health (cf. Palmore, 1968, p. 261).

[2] The statements to which respondents were asked to indicate whether they strongly agreed, agreed, disagreed, or strongly disagreed were as follows: (1) retirement is a pleasant time of life; (2) older workers should retire when they can, so as to give younger people more of a chance on the job; (3) work is the most meaningful part of life; (4) most people think more of someone who works than they do of someone who doesn't; (5) people who don't retire when they can afford to are foolish. Each response was given a score ranging from 1 to 4, with 4 being assigned to the response indicating the most favorable attitude toward retirement. The values for the five statements were summed and the totals were then divided into three approximately equal groups, which are labeled, in descending order, "favorable," "ambivalent," and "unfavorable."

[3] There is evidence that the post-retirement attitude is inversely related to the pre-retirement view about the desirability of retirement. In 1978 the men were asked to express their agreement or disagreement with the statement that "retirement is a pleasant time of life" (see footnote 2). Among men who retired between 1978 and 1980 those who had agreed with the statement in 1978 were more likely than those who disagreed to register disappointment in 1980 with their own retirement experience. The cross tabulation of the responses of the 306 respondents is as follows:

Relation between experience and expectation	Retirement is pleasant		
	Total	Agree	Disagree
Total percent	100	100	100
Better	32	25	33
Same	56	48	58
Worse	12	27	9

[4] Men who reported that they would now choose to retire at a different age were asked the reason. The responses of the 467 respondents who said that they would opt for a later date suggest that as many as two-fifths of those in this category realistically ought not be included there. About 40 percent of the total--38.7 percent of the whites and 45.5 percent of the blacks--said that they would have worked longer if their health had permitted. Unless one interprets this response to mean that in retrospect they would have evaluated their ability to continue to work differently, this group is not really changing their minds about the propriety of retiring when they did.

[5] But see footnote 4.

[6] Campbell, Converse, and Rogers (1976) note a difference between "satisfaction-with-life" and "happiness-with-life" measures, but conclude that the two items tap "somewhat the same state of mind" (p. 35) and behave in the same way where demographic correlates are concerned, except that older persons show more satisfaction than young persons, whereas measures of happiness vary

inversely with age.

[7] For a justification of this approach, see Campbell, Converse, and Rogers (1976), p. 79. We experimented with two other measures: (1) a weighted sum in which health and standard of living had a weight of two and the overall question had a weight of three; and (2) a simple dichotomous variable based on the overall question: very happy = 1; all other = 0. We chose the unweighted version because neither a factor analysis nor a multiple regression analysis provided evidence that justified weighting the separate responses. We preferred this to the simple dichotomous measure because of its explicit reference to several important "domains of life experience" (cf. Campbell, Converse, and Rogers, 1976, p. 63). Actually, the major findings are substantially the same irrespective of the form of the dependent variable. For an analysis of the effects of retirement on life satisfaction based on the NLS data but with a different definition of retirement and a dichotomous life satisfaction variable, see Beck (1982).

[8] Among the nonretired men the relationships of life satisfaction to region and size of community were stronger, in each case being significant at the 5 percent level. On the other hand, the relationship with type of worker was weaker than among retired men, and failed to achieve statistical significance.

[9] For the list of these questions, see footnote 2.

[10] The question is worded as follows: "Taking things all together, would you say that you're very happy, somewhat happy, somewhat unhappy, or very unhappy these days?"

[11] An analogous issue is suggested in a recent analysis of the effect of retirement on life satisfaction reported by Beck (1982, p. 623). In defending his list of control variables, the author indicates that "the only excluded variable that might alter the relationship between life happiness and employment status are social interaction/participation variables." He goes on to observe (correctly) that failure to control for these variables would tend to reduce, not increase, any negative effect of retirement on life happiness that might be observed. However, the issue we are raising is whether conceptually such variables should be controlled. Retirement, by definition, involves removing the retiree from the social context of the work group, and this is an element of retirement that some observers believe is psychologically damaging. Hence, even if it were possible to do so, it would seem inappropriate to control for the variable--i.e., to insure that retired and nonretired men were alike in the extent of their "social interaction/participation." We are suggesting that somewhat the same argument can be made with regard to the income variable.

[12] Beck dichotomized the variable differently from the way we do, however. He divided those who responded "very or somewhat happy" from all others. Since over 90 percent of the sample fell into the "happy" category, he was compelled to use logistic multiple regression.

[13] Specifically, these are: extent of physical impairment in 1976; health problems in 1980; net assets in 1976; total family income in the year preceding the 1980 survey date (omitted in the third specification); region of residence; size of community; occupation and type of worker of pre-retirement

job (or current job for nonretired men); age; marital status; extent of leisure time activities in 1978.

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The Center has also been active in manpower planning both in the U.S. and in the developing countries. A project for the Ohio Advisory Council for Vocational Education identified the highly fragmented institutions and agencies which supply vocational and technical training in Ohio. Subsequent projects for the Ohio Occupational Information Coordinating Committee have followed graduates of these programs. These data and information on occupational distributions of employers collected for the Occupational Employment Statistics Program are being integrated into a comprehensive planning model which will be accessible to trainees and employers and linked to a national network.

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For information on specific Center activities, write: Director, Center for Human Resource Research, 5701 North High Street, Worthington, Ohio 43085.

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Center for Human Resource Research

The Center for Human Resource Research is a policy-oriented multidisciplinary research organization affiliated with The Ohio State University. Established in 1965, the Center is concerned with a wide range of contemporary problems related to developing and conserving human resources. Its more than thirty senior staff members come from disciplines including economics, education, English, health sciences, industrial relations, management science, psychology, public administration, social work, and sociology. This multidisciplinary team is supported by approximately 70 graduate research associates, full-time research assistants, computer programmers, and other personnel.

The Center has become preeminent in the fields of labor market research and manpower planning. With continuing support from the United States Department of Labor, the Center has been responsible since 1965 for the National Longitudinal Surveys of Labor Market Experience. Staff have assisted in population and human resource planning throughout the world, having conducted major studies in Bolivia, Ecuador, Kenya, Sierra Leone, Venezuela, and Zaire. At the request of the National Science Foundation, a review of the state of the art in human resource planning was conducted. Other studies have assessed the impact of labor and education policy on labor supply and evaluated employment statistics collection methods. Senior personnel are also engaged in several other areas of research—collective bargaining and labor relations, evaluation and monitoring of the operation of government employment and training programs, and the projection of health education and facility needs.

The Center for Human Resource Research has received over two million dollars annually from government agencies and private foundations to support its research in recent years. Providing support have been the U.S. Departments of Labor, State, Defense, Education, Health and Human Services; Ohio's Health and Education Departments and Bureau of Employment Services; the Ohio cities of Columbus and Springfield; the Ohio AFL-CIO; the George Gund Foundation; the Rockefeller Foundation; and the Ford Foundation. The breadth of the Center's research interests is best illustrated by a brief review of a few of its current projects.

The Center's largest project is the National Longitudinal Surveys of Labor Market Experience. This project has involved repeated interviews over a fifteen-year period with four groups of the United States population: older men, middle-aged women, and young men and women. The data are collected for 20,000 individuals by the U.S. Bureau of the Census, and the center is responsible for data analysis. Since 1979, the NLS has followed an additional cohort of 13,000 young men and women between the ages of 14 and 21. This cohort includes for the first time those serving in the armed forces at the time of the initial interview. In addition to being the definitive U.S. national data set on the labor market activities of young adults, this continuing survey includes unique batteries of questions on such socially important issues as delinquency, alcohol and drug use, fertility, and prenatal care. For this cohort, field work is handled by the National Opinion Research Center. To date the Center's staff have prepared dozens of research monographs, special reports, and books on the NLS, and they also prepare and distribute data tapes for public use.

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